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ABSTRACT

This report provides an overview of the federally-funded early childhood research activities of fiscal year 1975. In order to assess the directions in which federal research programs are moving, ongoing research projects are analyzed both within individual agencies and within the federal government as a whole. The first chapter reviews the historical background, operational structure, and fiscal year 1975 activities of the Interagency Panel on Early Childhood Research and Development. Chapter 2 outlines the categories of emphasis selected by the panel as an organizational framework for the analyses of federal research activity: (1) applied and basic research; (2) global research; (3) research to benefit all children; (4) longitudinal research; (5) research on the research process; (6) research on the development process; (7) research on the family; and (8) research on the community and society. In Chapter 3, the combined research of all of the 21 agencies on the Interagency Panel is examined, and information is presented concerning the number of projects and amount of funding in each of the selected categories outlined in Chapter 2. In Chapter 4, similar analyses are presented separately for each agency. The appendices provide the priorities of the agencies for fiscal year 1976 and beyond in addition to other supportive materials. (Author/ED)

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IN MEMORIAM

Dr. Joseph M. Bobbitt, a founding member of the Panel, died unexpectedly in July, 1975. His empathy, leadership, and wit contributed immeasurably to the success of the Interagency Panels.

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TOWARD INTERAGENCY COORDINATION:

FY '75 Federal Research and Development Activities Pertaining to Early Childhood

Fifth Annual Report

Prepared for
The Interagency Panel on
Early Childhood Research and Development

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December 1975

Participating Member Agencies of the Interagency Panel on Early Childhood Research and Development

Department of Health, Education and Welfare (DHEW)

- Office of Human Development (OHD)
- Office of Child Development (OCD)
- Office of the Assistant Secretary for Planning and Evaluation (ASPE)
- National Institute of Child Health and Human Development (NICHD)
- National Institute of Mental Health (NIMH)
- National Institute of Neurological and Communicative Disorders and Stroke (NINCDS)
- Social and Rehabilitation Service (SRS)
- Rehabilitation Services Administration (RSA)
- Bureau of Community Health Services (BCHS)
- Office of Education (OE)
- National Institute of Education (NIE)

Department of Agriculture (USDA)

Department of Housing and Urban Development (HUD)

Department of Labor (DOL)

Department of Justice, Law Enforcement Assistance Agency (LEAA)

Office of Management and Budget (OMB)

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INTRODUCTION

The Annual Reports are the most fundamental and broadly-based of the working documents produced by the Interagency Panels. The reports are unique sources of information in that they provide an overview of on-going childhood and adolescence research activities across major funding agencies at the Federal level. They offer Panel members and agencies a first cut at the more extensive and detailed information that can be obtained from the Panels' information system.

As with the preceding reports, the major purpose of the Early Childhood Panel's fifth annual report is to analyze early childhood research supported by the member agencies during the last fiscal year, in order to assess the directions in which Federal research programs are moving, both within individual agencies, and within the Federal government as a whole. These analyses can aid Federal agencies in several ways. First, by abstracting research relating to children from the broad array of research areas which many agencies support, they allow each agency a more cohesive and articulate view of its own child-related research activities. Also, by presenting analyses of the research activity supported by each particular agency, the report enables an agency to compare its own pattern of research support with that of any other agency. In this way, an agency can identify the areas of research in which its funding activity overlaps with that of another agency's, or can detect points of convergence and congruence where increased interagency communication and coordination would be especially fruitful. Finally, an agency can examine the overall picture of Federal research and development in order to determine gaps in the total Federal effort that are relevant to its own research mission, and use this information to guide the development of its forward plans.

The first chapter of the report reviews the historical background, operational structure, and FY '75 activities of the Interagency Panel on Early Childhood Research and Development.

Chapter II outlines the areas of emphasis selected by the Panel to provide an organizational framework for the analyses of Federal research activity that follow in Chapters III and IV.

In Chapter III, the combined research of all of the agencies is examined, with information presented on the number of projects and amount of funding in selected categories of research. These categories pertain to major areas of research (e.g., cognitive growth and development, the family, educational services), major kinds of research (e.g., basic, applied, evaluation), and research target groups (e.g., by age, socioeconomic status, and race).

In Chapter IV, similar kinds of analyses are presented, but in this chapter they are presented separately for each agency, rather than for the overall Federal effort. Different research categories are analyzed from one agency to another, in order to reflect their different research missions and approaches, and provide the clearest picture of each agency's activity.

In the Appendix, priorities of the agencies for FY '76 and beyond are examined within a matrix of research issues and areas.

In summary, this report presents information on Federally-funded early childhood research projects active in FY '75. Some of these projects are continuing projects and were included in the data base of the last annual report; others are new starts. Thus, this report describes and analyzes on-going research only, and does not address completed projects. Information about research activities supported and planned during the fiscal years 1971 through 1974 can be obtained from the Panel's previous annual reports (Grotberg, Searcy & Sowder, 1972; Hertz & Harrell, 1974; Hertz, Harrell, & Grotberg, 1973; Stearns, Searcy, & Rosenfeld, 1971).

CHAPTER I

THE INTERAGENCY PANEL ON EARLY CHILDHOOD RESEARCH AND DEVELOPMENT

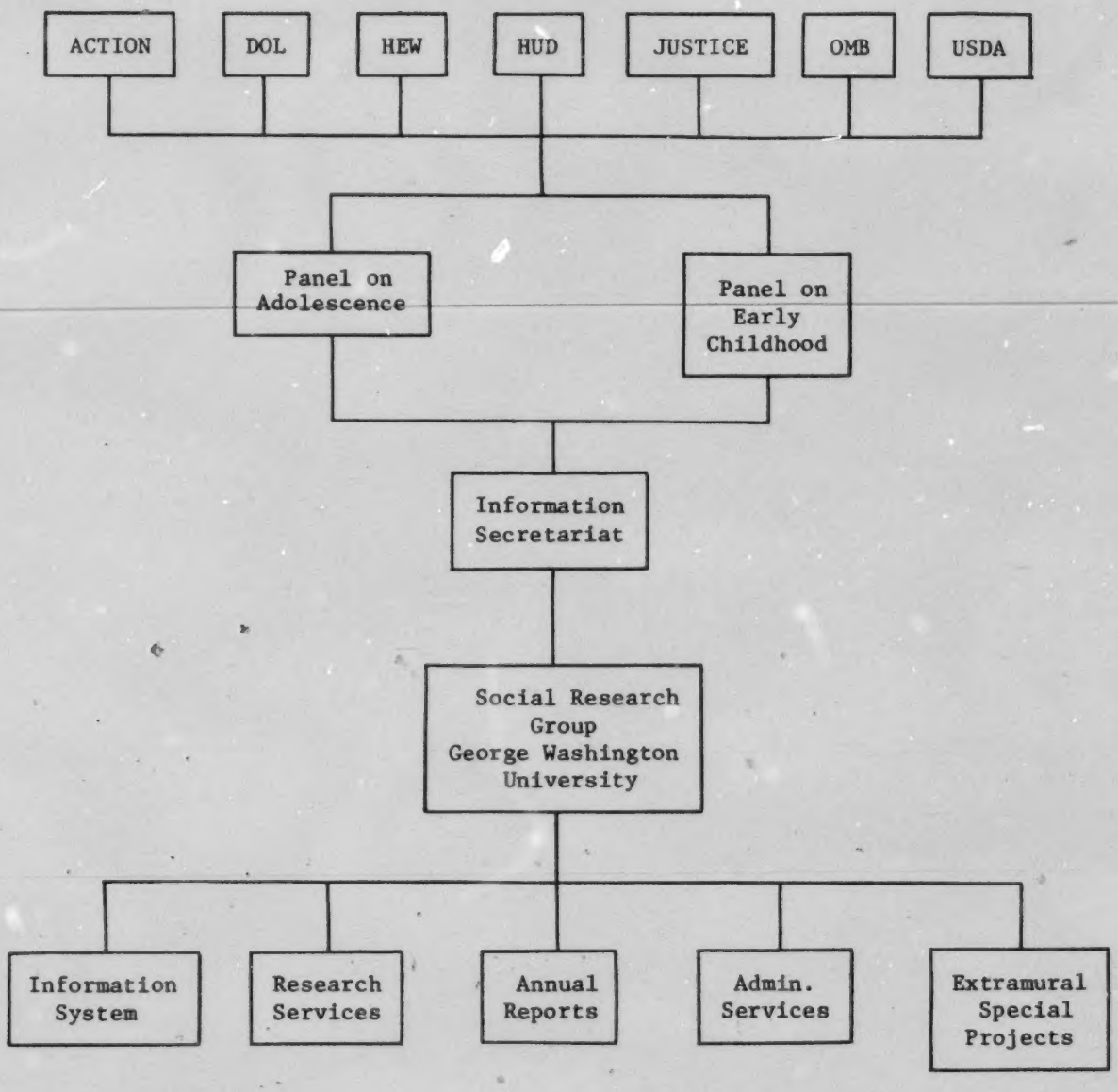
In 1970, the Interagency Panel on Early Childhood Research and Development was convened by the Director of the Office of Child Development at the request of the Secretary of the Department of Health, Education, and Welfare and the Director of the Office of Management and Budget. The primary mission of the Panel is to facilitate Federal interagency coordination and cooperation in the planning, funding and analysis of early childhood research and development (covering the age range of prenatal through nine years). The Early Childhood Panel served as an organizational model for another Panel, which was created in 1972 and similarly charged with promoting cooperation and exchange of information between Federal agencies who support work on youth and adolescents. The Interagency Panel for Research and Development on Adolescence, whose age coverage extends from ten years through adolescence and into the early twenties, carries out its tasks in close cooperation with the Early Childhood Panel. The two Panels share information about their agencies' research programs and plans, and diverse problems and issues of interagency concern. Furthermore, in cases where their interests coincide, the Panels participate jointly in special meetings and activities.

Operational Structure

The Panels draw their members from the Office of Management and Budget, ACTION, and from the Departments of: Agriculture; Health, Education, and Welfare; Housing and Urban Development; Justice; and Labor. They are chaired by Dr. Edith H. Grotberg, of the Office of Child Development, and are provided general research and support services by the Information Secretariat, established within the Office of Child Development in 1971, and by a contract with the Social Research Group at The George Washington University. The Office of Child Development furnishes the bulk of the contract funds, which are also

Figure 1

Organizational Chart of the Interagency Panels



contributed to by the other member agencies. A diagram of the basic organization of tne Interagency Panels is presented in Figure 1. The individuals who currently represent their agencies on the Panel are listed in Appendix A.

The support system at the Social Research Group has five major functions:[1] (1) the information system; (2) research services; (3) annual reports; (4) administrative services; and (5) extramural special projects.

At the close of each fiscal year, a team of staff members collects information from agency files about the individual research projects active during that year. The team prepares an abstract of each project, and classifies and codes salient aspects of the approach, procedure and content area of the project, using a system developed by the Social Research Group in conjunction with the Panels. The coded information is entered into a computerized data bank, which is available for use by Panel members and which provides important data for the Annual Reports and other documents. (The information system and the data collection process are described further in Chapter III and Appendix C.) As part of its research service, the Social Research Group undertakes for the Panel: state-of-the-art papers, position papers, library research studies, presentations at meetings of professional associations, reports of site visits to demonstration projects, and surveys of the member agencies' viewpoints on selected issues. (See Appendix F for a list of papers prepared in conjunction with the Panels.) A major publication of each of the Panels is this Annual Report. The Social Research Group also provides administrative support, which is especially critical in the dissemination of information both to the Panel membership and to outside groups and individuals. Extramural projects are occasionally undertaken to meet the Panel's need to collaborate and confer with individuals having expertise in a broad spectrum of research and professional domains.

Activities of the Interagency Panel During FY '75

Panel members met on a regular basis throughout the year, and examined the planning and funding of Federal research in early childhood, giving

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[1] This description of the support system of the Social Research Group for the most part is taken from a paper presented by Dr. Maure Hurt, Jr., at the meeting of the American Educational Research Association, April, 1974.

special attention to areas of need that cut across agencies. The staff of the Social Research Group supplemented these Panel efforts by preparing a variety of working papers and research reports, many of which drew their data from the information system maintained by the agencies represented on the Panel. Panel members also kept each other informed about research programs in progress or being developed in their respective agencies. For instance, at a Panel meeting held in March, 1975, Dr. Lois Elliot discussed research relating to children in the National Institute of Neurological and Communicative Disorders and Stroke program on communicative disorders, and in October, 1975, Dr. James Hamilton described recent activities at the Bureau of Education for the Handicapped.

Family Research

The proceedings (Hertz and Hertz, 1974) of a major conference on family research, sponsored by the Interagency Panel on Early Childhood, were published in the fall of 1974. The Conference on Family Research had been held in March, 1974 and attended by family researchers and practitioners, foundation representatives, members of the Interagency Panel, and other interested researchers and administrators from the Federal agencies. The disciplines represented by participants included psychology, sociology, anthropology, psychiatry, economics, education and pediatrics. Keynote addresses were presented by Margaret Mead, Curator Emeritus of Ethnology, American Museum of Natural History, and Stanley B. Thomas, Jr., Assistant Secretary for Human Development, Department of Health, Education, and Welfare. The conference participants met in small workgroups to discuss primary aspects of family research: family functioning, emerging family forms and life styles, cultural pluralism, and ethics and family research. The proceedings of the conference have been in great demand and widely distributed to members of the research community, to Federal researchers and administrators, and to agency directors. The Panel drafted a letter to the agency directors, explaining the content of the conference, underlining the Panel's special concern with the issue of ethics and research as set forth in the Proceedings, and urging the consideration of this issue by the agency directors according to each agency's particular focus and mandate.

Research Ethics

The Panels have shown a continuing interest in research ethics, and at their meetings have followed and discussed developments in the government and the research community that are related to this topic. During the year, the Panel members were presented a report on a session held at the annual convention of the American Orthopsychiatric Association, which focused on ethical issues of research on humans (and especially children). Similarly, the Panels were briefed on a special meeting on research ethics, held in conjunction with the 1975 annual meeting of the Society for Research on Child Development. In their own discussions, Panel members agreed on the necessity of safeguarding human subjects while, at the same time, they emphasized the importance of being sensitive to research needs and setting realistic and flexible guidelines, rather than overly rigid regulations. Panel members have been particularly interested in being kept appraised of the progress of the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research.

Comparability in Research

Another general interest of the Panel that surfaced in many guises throughout the year, is comparability in research. This interest stems from concern at the national level that research findings too often fail to add up to anything, even where projects focus on similar problems. Empirically derived information needs to be cumulative if it is to provide a broad basis for social policy decisions and if scientific advances are to keep up with changes in social practices and events. The meaningful synthesis of research findings hinges in part on the degree to which the concepts, measures, and procedures used by different investigators are comparable. Meaningful cross-study analyses of findings are difficult, if not impossible, when there is no way to determine the relation between the different methods which were used to derive those findings. The problem is aggravated by the understandable inclination of many researchers to develop new terms and measures with an eye toward the needs and constraints of their own studies, rather than the overall pattern of research in a general area.

The Panel continued to build on comparability-oriented activities which had been initiated during the two previous fiscal years, sharpening their own focus by moving away from exploratory discussions of the general problem of comparability in research, towards more pragmatic efforts aimed at developing tools to monitor and aid progress in increasing comparability.

An Analysis of Comparability in Research on Parenting Skills. As one step in assessing the scope of the problem, the Social Research Group was asked to determine the potential for comparability in selected projects supported in FY '74. Research on parenting skills was chosen as an area that included projects from many member agencies, and that was of expanding interest, and thus one in which recommendations would be particularly useful to the agencies. More than 100 projects, funded by nine different agencies, were concerned with parenting skills in FY '74. A sample of 68 of these project proposals was examined (Hurt and Ouellet, 1974) in order to answer three primary questions of interest to the Panels: (1) How well are the variables identified in each project? (2) How well is the sample defined in each project? (3) What efforts are made to enable other interested researchers to compare the results of one study with findings of related studies?

In order to evaluate the degree to which the projects met the above criteria, the projects were divided into the following clusters, based on their research objectives: system development and evaluation; development of parenting skills curricula; parenting skills in vocational training; parenting skills in support of ongoing programs for children; improvements of parenting skills for parents; parenting training for parents of high risk children; and studies of parent/child relationships.

In general it was found that while the needs and rationale for the projects were discussed at length, definition or explanation of the concepts and variables cited in the proposals received considerably less attention. There was some variability across clusters in the adequacy of the sample description, although here again there were many aspects of the sample on which little or no information was presented. Most often specified were the number of subjects in the sample (78.4% of all projects across clusters) and the age of the subjects (61.8% of all projects across clusters).

The sex, social class, and ethnicity of the subjects were specified in a much smaller percentage of projects (38.2%, 35.3%, and 23.5%, respectively). Even more sparse was information on how sampling units (such as schools, classes, or individuals) were to be selected.

In the 68 project proposals, 175 assessment instruments were cited by name. Not surprisingly, very few of these were to be used in more than one project. Of the 20 instruments that were mentioned in more than one proposal only seven were to be used in more than two or three different projects.

Finally, no explicit effort was made in the reviews of the literature to address the issue of comparability. While adequate attention often was given to the background and rationale for research hypotheses and designs, there was no attempt to explain how the experimental measures and procedures related to those of other relevant studies.

An Analysis of Comparability in Research on the Family. A similar analysis of 23 family research projects supported by the Office of Child Development was completed in FY '75. The report (Hurt, 1974a) had been undertaken in response to recommendations made by the principal investigators involved, who met in September, 1974, to share information, develop collaborative initiatives, and provide for greater cumulative knowledge about the family. The report presents abstracts of each of the 23 project proposals, and information on the samples, assessment instruments, and conceptual approaches that were to be used.

The two reports described above were received enthusiastically by the Panel members, who suggested that this kind of analysis, especially if applied to research across agencies, could facilitate the use of common instruments by researchers, and aid future work on instrument development. Panel members concluded that there was need for further information about instruments used in all Federally supported research projects.

Tests and Measures. Two specific activities were undertaken to follow up on the general concern that the lack of information about assessment instruments constituted a major obstacle to comparability. One activity was an investigation of the need for large-scale systems for the exchange of information about tests in use or under development. While the problem affects both

early childhood and adolescence research, at least some suitable mechanisms for the exchange of information about instruments do exist at the early childhood level, such as the Head Start Test Collection, established at the Educational Testing Service in 1967. Acting on the assumption that instrument dissemination is less satisfactory at the adolescence level, the Panels decided to explore the feasibility of an instrument repository for researchers working with adolescent populations. Experts were consulted at the UCLA Center for the Study of Evaluation, the Stanford Research Institute, and the ERIC Clearinghouse on Tests, Measurements, and Evaluation at Princeton. Later in the fiscal year, a report (Stern, 1975) was presented to the Panels, reviewing the primary issues involved in instrument dissemination within the following framework: (1) the need for an information system; (2) information resources now available; (3) options open in designing a repository system; (4) anticipated problems and cautions; and (5) recommendations for action. Anticipated problems are discussed specifically with regard to the selection of instruments, the misuse of instruments, publication rights, and the advantages and disadvantages of replication. The report reaches the tentative conclusion that a narrow focus on instrumentation pertaining to adolescence would be inappropriate, in that it would further compartmentalize the growth process, and be counter-productive to efforts to promote the concepts of continuity in human development and comparability in research. The report goes on to contend that there is a definite need, however, for a comprehensive instrument repository system which would tie together information now available from many diverse sources.

Finally, additional study and exploration is recommended, to determine the direction a future repository might take, with the following suggestions singled out: (1) carry out a national survey of potential users and contributors; (2) convene a meeting of experts in the field of research dissemination; and (3) conduct a cost effectiveness study.

Another activity pursued by the Panels was to develop the capacity to analyze the measurement instruments being used in all of the research projects funded by the member agencies. The 3,116 project proposals included in the FY '74 information system were examined, and the name of any item which appeared to be a test or measure, was recorded. A review (Heyneman,

1975) of these tests and measures was presented to the Panel in the spring of 1975. In all, 514 instruments were cited in the proposals funded in FY '74. Only to a small extent did investigators plan to use common instruments across projects. In fact, the majority of these instruments (64%) were cited in only one project proposal. Thirteen percent were to be used in two projects, and seven percent in three. Many of the measures that were named were the investigators' own creations; only 225 tests could be found in test and measure source books that were consulted. The report examines the distribution of these referenced tests by subject matter, such as academic achievement, sensory/motor, and character/personality.

The Panel will continue to undertake similar analyses of instruments used in Federally-sponsored research projects, and will search for ways to use this kind of tool more effectively in furthering comparability in research and developing cumulative research knowledge. More refined information on tests and measures was collected during the classification and coding of FY '75 research projects, and some of this information on current research projects will be reviewed in Chapter III of this annual report.

In their discussions over the past few years, the Panels have identified the description of concepts, measures, and procedures as one level at which efforts to increase comparability need to be applied. The more precisely and clearly that these aspects of the research process are set forth in reports and publications, the more easily research findings can be interpreted, compared, or replicated. Adequate descriptions of sample groups and information on demographic variables are especially crucial for meaningful generalizing of findings, and for sorting out the contributing influences of background variables. White and Duker (1973) surveyed practices for describing samples of children in several psychological journals, and presented evidence that researchers need to provide more accurate and meaningful information about their samples, especially with regard to social class, ethnicity, and neighborhood.

In FY '75, a study was undertaken for the Panels to replicate White and Duker's work, using a wider sample of journals (24) and more recent issues. The Panel's study also goes beyond the previous research in examining the frequency with which sample characterisitcs are specified within various

content areas, such as cognitive, socioemotional, or health. All articles published in the 1974 issues of the selected journals, which contained samples of children, were included in the survey, yielding a total of 1,353 articles.

Outreach Activities

From its inception the Panel has worked to involve in its activities interested individuals and groups from the Federal government and the general research community, both as sources of expert advice and as consumers of the information it collects and synthesizes. One mechanism by which the Panel chose to accomplish these purposes was the special interest area meeting. These meetings are open to all members of the Panels, to other concerned individuals from Federal agencies, and to selected specialists who are invited to share their expertise with other participants. In past years these meetings have covered topics ranging from home-focused programs, to longitudinal research, to marker variables and comparability.

As their discussions and activities in certain areas have taken a sharper focus in the last two years, the Panels have moved beyond their practice of consulting only a few selected individuals (a technique which was especially well suited to the initial clarification and exploration of basic issues and problems in an area) and have undertaken broader outreach activities. In FY '75, the Panels further expanded efforts which they had initiated during the previous fiscal year to involve the larger research community, proceeding primarily along three main fronts: (1) invitational conferences; (2) presentations at professional societies; and (3) publications in journals and newsletters.

Conferences. Federal agencies have a unique perspective regarding comparability in research. They are ultimately accountable for the funds they allocate for research, and one of the tasks that consequently fall to them is to try to add up the results of individual research projects which they support. There are no other sectors of the research community that share this responsibility in quite the same way. One group that has to grapple with problems of comparability more than others, however, consists of

the editors of journals. Even though they usually judge each manuscript primarily on its own merits, many editors also look beyond the technical quality of a study and try to assess the significance of its contribution to the field at large, and the way in which it relates to other studies. Regardless of the degree to which (if at all) the editors encourage programmatic or comparable research, their editorial capacity at least puts them in a good position to assess comparability as it occurs or fails to occur in their particular fields of research.

Accordingly, the Panels chose to invite journal editors to their first large-scale conference on comparability, so that the Panel members could share their ideas with individuals who had the opportunity to recognize and do something about problems of comparability in research. Fourteen editors[2] attended the November 4th conference, representing journals from many fields relevant to research on children and youth, such as developmental psychology, sociology, education, pediatrics, adolescence, and community psychology. Dr. Edith Grotberg, Panel chairperson, delivered an opening address in which she described the history and functioning of the Panels, and reviewed the Panel activities on comparability which had been undertaken to date. Dr. Joseph Bobbitt, National Institute of Child Health and Human Development, also addressed the participants, explaining the background of the Panels' concerns about comparability, and clarifying the function of the conference:

> If [the researcher] is dealing with a group of sixth graders in Cleveland, we would like to see those six graders described in such a way as to find out whether or not these results can be compared with some that were produced on the West Coast. It's really quite a simple matter conceptually, but from an operational point of view, it's very difficult. We would like to promote steps toward the greater comparability of research

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[2]Eli M. Bower, American Journal of Orthopsychiatry; Philip Costanzo, Journal of Personality; Greta G. Fein, Journal of Social Psychology; H. Carl Haywood, American Journal of Mental Deficiency; Wendell E. Jeffrey, Child Development; Celia S. Lavatelli, Quarterly Review of Early Childhood Research; Boyd R. McCandless, Developmental Psychology; Samuel Messick, Review of Educational Research; Waldo E. Nelson, Journal of Pediatrics; Daniel Offer, Journal of Youth and Adolescence; David S. Palermo, Journal of Experimental Child Psychology; Charles D. Spielberger, American Journal of Community Psychology; Kaoro Yamamoto, American Educational Research Journal; Morris Zelditch, American Sociological Review.

> results and toward developing cumulative research. . . .I think it's a good thing for us to spend our time and effort trying to get the professions to understand the problem. Naturally the people who are running journals are constantly reviewing the products of investigators; they are giving them some advice. We thought it would be a good idea to talk to you about the problem. We didn't ask you to come here to say that you will set up certain kinds of standards and requirements, but we think you should know our concern about this problem. We also feel that you should know that scientists generally are very much in favor of promoting comparability of research. I think it is wise for us to get together, discuss the problems and consider some of the requirements with which we are faced if we are to improve comparability, without in any way hamstringing or handicapping the investigator. . . .We would like you to consider these problems very seriously and to give us your advice and counsel.

These opening remarks were followed by a round-table discussion in the morning, and smaller work group sessions in the afternoon. Before the participants dispersed, the concerns, questions, and recommendations raised in the individual work groups were reviewed by all in a final plenary session. The proceedings of the conference were published the following month and distributed to the conference participants, Federal agencies, and other interested persons and groups (see Bell & Hurt, 1974).

Notwithstanding the differences of opinion which can be expected any time a large group of individuals convenes, both the editors and Panel members appeared to support a common objective of obtaining the most meaningful results as quickly as possible from the energies invested in research on human development. Participants stressed the importance of sound theory as a prerequisite of methodological strength and comparability. Also touched on were the needs for the adequate description of samples of children and adolescents, the establishment of ecological or setting validity of measures and the judicious inclusion of marker variables to assist generalization from one study to another.

While there was some dissent relative to each proposed course of action, and no consensus was reached relative to priorities, there was substantial support within one or more of the discussion groups for each of the following proposed courses of action (Bell & Hurt, 1974, p. 22): (1) that the agencies

provide a priority framework indicating key problem areas of research, the reasons why these areas have been selected, and an indication that they would be responsive to a range of methodological and theoretical proposals designed to produce solutions; (2) that articles treating the difficulties and importance of comparability be prepared for publication in the journals in order to stimulate interest, as well as to lay the groundwork for more specific recommendations in certain problem areas of research; (3) that the Federal government or editors encourage the preparation of review articles describing background information and marker variables needed in specific research; (4) that editors monitor research in progress so that they can solicit research reviews when synthesis and integration appear needed and, in many other ways, take a more active rather than reactive role relative to research output; (5) that groups of experts be convened to evaluate research in certain problem areas in order to develop recommendations, descriptive information, and research design features needed to promote comparability; (6) that information on a set of descriptors and marker variables be requested by editors to accompany journal submissions, and that such descriptive information be collected and deposited in a central place, or with a group of experts convened, as described in (5) above. It was speculated that the effort to collect this information, "after the fact" so to speak, would eventually lead to adoption of designs that provide for more comparability in the first place.

The Panel sponsored the Second Conference on Comparability in Research on May 5th and 6th, to which they invited deans and professors who shape graduate training programs in child or adolescent research, representing 36 universities through the country. The university representatives met with Panel members and other researchers and administrators from the Federal agencies to examine, especially from their perspective as research trainers, problems that researchers face in trying to synthesize research data and generate cumulative scientific knowledge. The primary focus was on ways to facilitate the analysis of findings across independent research studies in which definitions, variables and procedures differ along indeterminant dimensions, as is often the case in research on child and adolescent development.

The participants tried to identify barriers in existing research practices, attitudes and reward systems within the universities, graduate training programs, and funding agencies, that hinder comparability and cumulativeness in research. Areas which were tentatively identified by participants as in need of increased Federal support and more careful attention from researchers and those who train researchers include the following: (1) improved collection and dissemination of information so that all scientific reports, bibliographies, proceedings, and other sources of information are available to enable researchers to address a particular area as a whole and thus carry out research that can augment existing knowledge in a more cumulative way; (2) more precise conceptualization and description of demographic variables to facilitate the comparison of sample populations; (3) replication of research studies that are or may be cornerstones of large areas of interrelated studies; (4) research directly focused on measurement and validation of instruments in order to provide researchers sound bases for rating and selecting measures for comparability purposes; (5) the use of marker variables to facilitate comparability in research; and (6) long-term programmatic research, especially longitudinal and multivariate studies, as a way of identifying or predicting those variables which will be most useful as markers.

Participants discussed implications of proposed changes such as the above for graduate training. More intensive examinations of the goals and procedures of graduate education were recommended, both on an individual university or department basis, and on a cross-university basis, such as would be possible in national conferences.

Two recommended strategies for increasing the capacity for comparability in research and cumulative knowledge which received considerable enthusiasm concerned: (1) the expanded use of graduate internships and sabbatical opportunities in Federal research agencies, in order to acquaint graduate students and professors with problems encountered at the national level in trying to integrate individual research efforts; (2) the use of individual Federally-supported meetings of researchers with common substantive interests,

or on a grander scale, the creation of a system of expert panels, each focused on a major problem area in research on childhood and adolescence, with the long-term responsibility of examining ongoing research, as a means of determining key obstacles to scientific progress and strategies to advance comparability and the accumulation of findings.

The proceedings of the conference, which include the opening remarks by Dr. Edith H. Grotberg, Panel Chairperson, and Richard Q. Bell, University of Virginia, and summaries of the four workgroup discussions, are available from the Social Research Group.

Presentations at Professional Societies. Having sponsored an open discussion on comparability at the 1973 annual meeting of the American Psychological Association, the Panels decided to organize a symposium at the 1974 annual meeting of the APA, at which they could present formal papers on comparability and cross-study analyses in social science research. Dr. Edith Grotberg served as moderator for the symposium. Dr. Maure Hurt, Jr., presented a progress report on the Panels' efforts to increase comparability and cumulative knowledge in research on children and youth. Dr. Richard Q. Bell, who had been chief of the Child Research Branch at NIMH prior to taking a position at the University of Virginia, delivered a paper on the rate of research progress in the context of societal change, and outlined some possible mechanisms within the research establishment for accelerating the accumulation of usable scientific information. Dr. David Pearl described some initiatives undertaken by NIMH to further cumulative knowledge, and in particular an ongoing series of successive workshops aimed at promoting the clarification of concepts and the use of marker variables in research on locus of control.

The Panel also sponsored a workshop on March 24, 1975 at the annual meeting of the American Orthopsychiatric Association. At the workshop, chaired by Dr. Edith Grotberg of OCD and Dr. Ira Lourie of NIMH, Panel representatives and Orthopsychiatry members discussed comparability in research. Dr. Pearl explained the Federal agencies' concerns and approaches to this problem, and reviewed the Panels' series of meetings with researchers, journal editors, supporters of research, and policy makers. Dr. Maure Hurt reviewed the paper, "Parenting Skills: Comparability Potential," and Dr. Richard Q. Bell and Dr. Thomas Hertz discussed some options that could be

taken by the research community, including the use of marker variables, to increase comparability in research on children and youth.

The Panels will continue to use meetings of professional associations as opportunities to reach researchers in the field and to involve them in their efforts to enhance the coordination of planning and funding of research at the Federal level. A Panel-organized symposium will be presented at the annual meeting of the American Educational Research Association in the spring of 1976.

Publications in Professional Journals and Newsletters. Although the Panels have a mandate to coordinate Federal funding of research activities relating to early childhood and adolescence, and consequently answer primarily to the Federal agencies, Panel members have recognized from the first that they cannot carry out these functions in a vacuum, cut off from researchers in the field. Although the Panels have communicated with and solicited input from many noted investigators and educators, these selected individuals can represent only a small portion of the larger research community. In order to reach a wider audience, the Panels began a concerted effort last year to publish editorials and articles in the journals and newsletters that serve childhood and adolescence researchers and research consumers.

The structure and function of the two Interagency Panels were explained thoroughly in an article by Dr. Edith Grotberg (1974), which appeared in the Courrier, a publication of the International Children's Center. Dr. Grotberg described the background for the creation of the Panels, and reviewed the Panels' primary activities, especially with regard to the dissemination of research information, the determination of needs, gaps and duplications in research, the coordination of research planning and support and the development of more cumulative research findings.

Guest editorials addressing comparability in research have been written by the Panel chairperson for: the newsletter of the American Vocational Educational Research Association (1975); the Educational Research Manager (1975); and the Journal of Youth and Adolescence (Grotberg & Hurt, 1975). A description of the Panels and their functions has appeared in the newsletter of the Society for Research in Child Development (1975) and a review of the Second Conference on Comparability in Research was published in the newsletter of Division 7 of the American Psychological Association (1975).

Finally, an article on comparability and generalizability in developmental research will be published in the March, 1976 issue of Child Development (Bell & Hertz, in press). This paper cites evidence that societal change can exceed the rate at which meaningful research findings are produced and further examines current funding and research practices to determine obstacles to research progress. It considers mechanisms by which progress might be accelerated, especially through greater comparability and generalizability of findings.

Information Utilization in FY '75

Since the 1971 inception of the Early Childhood Panel and the 1973 formation of the Panel on Adolescence, the bank of data has been held in common and all publications are available to members of both Panels. The Panel members themselves act as conduits of information for their agencies and to sectors of the research community as well. This activity is supported logistically by the Social Research Group which reproduces and distributes publications and documents under the Panels' direction.

The value of the Panels' research information might be illustrated by the following figures. In the first nine months of 1975, the Social Research Group provided 4,664 publications and documents to members of the Panels, other Federal, state, and local officials, and members of the research community. An additional 3,860 informational items were distributed, such as working papers, minutes of meetings, agendas, and letters. The rate of dissemination of documents and publications has increased appreciably each month. The total number of mailings for October and November was 1,521. Between January and November, approximately 6,500 requests were made to query the system for information on current Federal research. The majority of these were to fulfill the Panels' informational needs; however, there was a substantial number of requests from individuals unconnected with the Panels, both in and outside the Federal Government.

With many queries there has often been an accompanying request for complete project abstracts in addition to the computer-generated project titles. The abstracts provide information on the objectives, methodology,

sample and instrumentation of each project. Requests from the FY '75 file have already resulted in the distribution of more than 7,000 abstracts. Furthermore, with the activities planned, this number should increase by several thousands before the end of 1975.

In sum, between January and November 30, 1975, the Panels have distributed in excess of 6,000 copies of the more than 30 publications and documents written by the Social Research Group. More than 6,500 requests have been addressed to the information system, and more than 7,000 abstracts provided to requestors.

CHAPTER II

EARLY CHILDHOOD RESEARCH NEEDS: FRAMEWORK FOR THE ANALYSIS OF FY '75 RESEARCH

The foremost purpose of this report is to convey a clear picture of early childhood research sponsored by the Federal government in FY '75. Since there are far too many projects involved to discuss the actual goals, design and methods of individual research projects, data are presented on amount of activity (in terms of the number and cost of projects) relating to various categories of research. This chapter introduces and explains the general categories that constitute the framework for the analyses that follow in Chapters III and IV.

As the Panel has worked to facilitate interagency coordination, it has identified key research areas and approaches that merit continued or increased support. It is with regard to these areas that the Panel is especially interested in articulating gaps and imbalances among the agencies' activities. Although there have been some changes each year in terms of specific emphases and interests, the general areas and approaches focused on by the Panel over the past several years remain essentially the same. Consequently, in this report they will be outlined only in brief, and the reader is referred to the Panel's prior annual reports (and in particular to Hertz & Harrell, 1974, and Stearns, Searcy, and Rosenfeld, 1971) for a more extensive consideration of particular issues and questions that need to be addressed in early childhood research.

The general categories which provide an organizational framework for the analysis of early childhood research and development activities are: (1) applied and basic research; (2) global research; (3) research to benefit all children; (4) longitudinal research; (5) research on the research process; (6) research on the developmental process; (7) research on the family; and (8) research on the community and society.

Applied and Basic Research

The Panel has encouraged a balanced representation of basic and applied research. On the one hand, it has expressed strong support for policy-related research, and in its meetings, conferences, and papers, has identified specific research needs with regard to many high-priority social problems. The Panel has taken the position, however, that the long-term viability and productivity of our national research enterprise also depends on the open and spontaneous pursuit of basic research problems, even though such activities may have no immediate value for application to social issues. The Panel's eclectic approach to research support reflects its primary objective of coordinating the efforts of agencies which have heterogeneous mandates, policies, and priorities, which employ a variety of funding mechanisms, and which support many different kinds of research activities.

In the next two chapters of this report, information is presented on the type of mechanisms used in the allocation of FY '75 funds: contract, grant, or intramural. The research activity itself is classified as one of five major kinds: basic research, applied research, evaluation research, research support and utilization activities, and policy research. For the purposes of the Interagency Panel Information System, and this report, these primary kinds of research are defined as follows.

Basic research refers to research directed primarily toward the increase of knowledge, the improvement of understanding, the provision of background information, and the discovery of basic relationships. It is not necessarily applicable to solutions of immediate problems, and may include theory building.

Applied research refers to research in which results are intended to be more directly applicable to immediate problems than basic research. It may be derived from basic research or theory or may be empirical. It may be aimed at showing how existing knowledge can be used in new and useful ways. When appropriate, applied research projects are further classified in this report according to three subcategories: (1) pilot studies (small scale initial trials to determine feasibility and to identify problems in preparation for larger efforts); (2) development (the construction of

tests, systems, materials, methods, media, equipment, facilities, prototypes, models, etc.); (3) demonstration and/or replication (activities designed specifically to show the method of operation or applicability of a research or program model).

Evaluation research refers to research designed to determine the overall effectiveness of a broad program, projects, models, strategies, materials, methods and costs.

Research support and utilization activities refer to projects funded with research dollars that do not gather or analyze data, but support the planning or implementation or dissemination of research related to children and adolescents, such as conferences, publications, and the installation of proven models.

Policy research refers to studies of needs, goals, priorities, and guidelines, and often includes state-of-the-art papers and library research.

Finally, information is given on the number of projects in which there are specific plans to include components of: (1) planning; and (2) dissemination.

Global Research

As used here, global refers to theoretical models and research strategies which emphasize systems of phenomena. The Panel has encouraged an increase in global research along two particular lines. First, there is a need for more studies of the whole child, in which the focus is on interrelationships among the primary processes of cognitive, social, and physical development. Second, Panel members, reflecting their agencies' concerns, continue to be enthusiastic about ecological investigations of child rearing and development. In fact, the Panel members have chosen the ecological approach as a major theme to guide their coordinating activities during FY '76.

The amount of research oriented toward the whole child can be gauged in several ways. First, and most directly, data will be reported on those projects in which emphasis is placed on the overall pattern of physical, cognitive, social and emotional growth and development. Since few studies focus on all of these processes, however, a broader net is necessary to isolate investigations which relate to interrelations among a subset of

these developmental processes. One way to accomplish this is to tally projects which have as a primary focus one of the developmental processes, and as a secondary focus another of the developmental processes. (See p. 35 for an explanation of primary and secondary focus.)

Ecological research is even more difficult to reflect as a discrete category, since it refers more to a broad orientation than to a specific methodology, and can be applied to a vast array of substantive areas. For instance, Bronfenbrenner (1974) contrasts this general approach with theoretical models in human development that focus attention on processes occurring within a single setting, such as a classroom, and argues that

> an ecological orientation points to the additional importance of relations between systems as critical to the child's development (e.g., the interaction between home and school, family and peer group). . . .Present theoretical orientations tend to be limited to those ecological systems that actually contain the child himself (e.g., family, preschool, classroom, peer group); they seldom include the adjacent or encompassing system which may in fact determine what can or cannot occur in the more immediate context. Such encompassing systems include the nature and requirements of the parent's work, characteristics of the neighborhood, transportation facilities, the relation between school and community, the role of television (not only in its direct effect on the child but in its indirect influence on patterns of family and community life), and a host of other ecological circumstances and changes which determine with whom and how the child spends his time. (p.4)

An assessment of activity along ecological lines will be presented in the analysis sections. Given that the ecological approach is so nebulous and multifaceted, however, these figures must be interpreted with caution. These studies may cover many different issues relating to the child, the family, and other encompassing systems, and may employ quite different research strategies.

Research To Benefit All Children

Research and development studies tend to concentrate on particular populations or types of children, guided by the specific legislative language underlying the funding agencies' mandates, or simply by precedents in the research literature. Once a theoretical or empirical model has been developed, it often is perpetuated through inertia--sometimes it can be easier for investigators to refine, extend, or modify existing work than

to begin anew. Furthermore, since the target group often is defined by the research program rather than vice versa, the same categories of children can be studied time and time again, while others, equally deserving of attention, go unnoticed or forgotten. Thus, interagency coordination is just as crucial in insuring a balanced representation of the target groups which participate in (and ultimately benefit from) research and development activities, as it is in insuring an appropriate distribution of research across different content areas and approaches.

Several aspects of the targeted population of FY '75 research will be examined in this report. The percentages of research relating to different age groups will be reported, covering the periods from prenatal through 10 years. The backgrounds of the children will also be examined, including race and ethnic identity, socioeconomic status, and neighborhood setting. Finally, data will be presented on projects relating to children with special characteristics, such as the physically, intellectually, and emotionally handicapped, academically slow, physically ill, bilingual, abused and gifted.

Longitudinal Research

Longitudinal research is another of the Panel's long-standing interests (e.g., see Grotberg & Searcy, 1972; Lazar, 1972; Lazar & Chapman, 1972; Sowder, 1972). Selecting this as the theme of one of its first special interest areas, the Panel has repeatedly urged increased use of longitudinal methods as a means of providing information about developmental phenomena, particularly with regard to the long-term impact of intervention and social action programs. Accordingly, FY '75 support for research incorporating longitudinal designs will be examined, broken down by major content areas.

Research on the Research Process

The attention given by the Panels to longitudinal issues illustrates the breadth of their interests. While one of the Panels' goals is to enable agencies to better coordinate their activities with respect to critical areas of research (thus their interest in analyzing the content or focus of ongoing research projects), they have made a similar commitment to develop and share information about the research process per se. All phases and

aspects of the research process are included in this emphasis, from planning, to methodology, to dissemination of research findings and models.

Methodological innovation is critical, of course, to all areas and kinds of research on children and youth, but especially so with regard to large-scale complex studies of the child's ecology, and of the long-term impact of intervention and service programs. Methodological activity is difficult to assess, however, in a survey of research project proposals. More often than not, efforts to study and improve methodology are not undertaken as separate endeavors, but as secondary aspects of a larger issue-oriented research project. Furthermore, the need for methodological refinement is often not even anticipated at the proposal stage of a research project, but is subsequently discovered as unexpected problems arise during the course of the research. In light of this, it can be assumed that the data to be presented on methodological work, which reflect primarily direct and self-professed efforts to study research methods, offer a conservative estimate.

Several kinds of information will be provided about the study of research methods. Projects are classified according to the primary aspects of methodology under investigation: (1) instrumentation, which is broken down further into behavior observation techniques, techniques of classifying data, and tests and measurements; (2) statistical analyses; and (3) research bias, which covers attempts to determine or control influences by variables other than those which the research purports to study, such as the effects of the researcher or research setting, and to develop methods and measures that are not biased with regard to the cultural, racial, or ethnic background of the research participants.

As a supplement to data described above, information will also be presented on methodologies used in FY '75 research projects. This second set of data does not isolate those projects which focus on the study of research methods, instruments or procedures, but merely reports the extent to which the following methodologies are used: (1) longitudinal study; (2) pretest/post-test design; (3) case study; (4) multidisciplinary approach; (5) observation; (6) interview; (7) questionnaire; and (8) survey.

The multidisciplinary approach is another that is difficult to discern. Many projects, especially those that involve applied research or research on comprehensive social action programs, may borrow aspects of several disciplines,

yet actually be guided by the theoretical and empirical perspectives of only one discipline. In order to concentrate on those that are more truly interdisciplinary in spirit, projects are identified as multidisciplinary only if they involve the combined use of methods, instruments, and professional staff (all of these) from more than one scientific background.

A final aspect of methodology, which relates particularly to the issue of comparability in research, concerns the distribution of tests and measures. Which measurement instruments do investigators propose to use, and in how many projects? To answer this question which has been raised by the Panel members, the names of all instruments cited in the project proposals are recorded. The distribution of tests by specific content areas will be examined in detail in a later document; the general frequency distribution will be reviewed briefly in the next chapter of this report.

The Developmental Process

The study of the processes of physical, social, and intellectual development has always provided a cornerstone for developmental psychology, biology, physiology, and the other sciences that together contribute to early childhood research. Many agencies which have different mandates and accordingly support research along quite different lines, nevertheless share an interest in the developmental processes. While such projects account for a large share of each agency's basic research, there has been a trend over recent years to study these processes, and their interrelationships, within the context of applied research issues and particularly in conjunction with comprehensive intervention programs.

In order to delineate the pattern and scope of research on the developmental process, both across and within agencies, projects have been classified according to the three major categories of physical, cognitive, and socioemotional development, and various subcategories within each of these three. The decision to describe the focus of research activity in terms of cognitive, socioemotional and physical development, as discrete processes, was made for the sake of convenience and clarity. Care must be taken in interpreting the data, however, not to attribute compartmentalization where

there is none. In many projects, these processes actually are studied as intermingled aspects of development and are not necessarily isolated from one another.

In the analysis section, physical development is broken down into the following topics: (1) body growth; (2) motor development; (3) sensory processes; (4) physical characteristics; (5) handicapping conditions; (6) physical disease; (7) injury; (8) alcohol abuse; (9) drug abuse; (10) poisoning; (11) child abuse; (12) nutrition; (13) genetics; (14) pharmacology; (15) epidemiology; and (16) health issues related to pregnancy and childbirth.

With regard to cognitive development, data is reported for: (1) perception; (2) attention; (3) concept formation; (4) problem-solving; (5) creativity; (6) memory; (7) learning; (8) language; (9) reading; (10) cognitive achievement; (11) intellectual handicaps; and (12) computer simulation of thought.

The subcategories of socioemotional development include: (1) perception of self; (2) interpersonal relationships; (3) attitudes; (4) values; (5) motivation; (6) personality characteristics; (7) emotional development; and (8) social behavior patterns.

The Family

The Early Childhood Panel, in addressing research concerns relating to the effects of primary environmental influences on the child, has chosen to concentrate on the family as a basic and critical unit, in that it constitutes a major aspect of the young child's world and links the child with other major environmental systems. The family theme provides an appropriate analytical framework within which to consider research questions on an interagency basis, since each member agency of the Panel has a legislative mandate to deal with issues relating to the family. The concerns and priorities identified by the Panel and its member agencies with regard to family research have been outlined in two Panel documents (Harrell, Hurt, & Grotberg, 1974; Hertz & Hertz, 1974). The former paper surveys agency interests in family-oriented research, and the latter reports the proceedings of a major conference

on family research, sponsored by the Interagency Panels in March, 1974.

High on the Panels' list of goals is a better understanding of the impact of the structure of the family on family life and child development. Information will be presented on research activity focusing on family structure, which concerns factors such as the composition of family members, the spacing of children, and the size of the family. Specific subcategories which are singled out in the text are: (1) the nuclear family; (2) single-parent family; (3) the extended family; (4) the commune; (5) families with adoptive or foster children; and (6) working mothers.

Another area of interest to most of the agencies represented on the Panel concerns processes of family functioning. In order to elucidate research activity along these lines, data will be reported on studies relating to: (1) child rearing practices; (2) the ecology of the home (which refers to the child's interaction with his home setting, and includes studies of the presence or absence of reading materials, or the adequacy of the setting for child rearing); (3) intrafamily relationships, broken down into parental roles and behavior, sibling relationships, and parent-child relationships ; and (4) family health.

Finally, a broad category of research questions which emerged from the Panel's earlier survey of agency interests pertain to transactions between the family (and its internal systems) and systems external to the family, which include the schools, hospitals, legal institutions, churches, and other institutions, groups and individuals who make up the community in which the family functions. Studies touching on the reciprocal impact of the family on external systems and vice versa, will be reflected in the analysis under the category of the family/society interface.

The Community and Society

The Federal government invests a large proportion of its early childhood research funds into studies of the broader elements of the environment and into the examination, design, or evaluation of the social institutions and broad intervention and service programs charged with promoting the educa-

tion, health, and well-being of children. Research activity in this area in particular reflects recent interest in the ecological approach--in studies of the reciprocal influences between the child and the significant individuals, institutions, and activities within the child's neighborhood and community. There is a special need to clarify the way in which interactions between the child and the social and physical environment differ across social, cultural, and economic lines, and across urban, suburban, and rural settings, in order to help children develop to their full potential within a culturally plural society.

FY '75 research activity focused on these broader social issues will be analyzed within the context of several major categories. The first concerns studies of the environment of the child immediately beyond the home, i.e., the neighborhood or community environment. Of special interest here are investigations of the child's community in terms of geographical location, housing conditions, and facilities and resources (other than those provided by the home or by intervention programs).

The broader environment is the focus of another set of studies. Such studies are oriented toward the behavior and development of children within the context of the general influences and constraints imposed by the society in which children live. Specific subcategories include the following: (1) cultural effects (e.g., studies of the attitudes, values and norms with which children are in contact); (2) socioeconomic factors; (3) religious environment; (4) television; (5) social crises (e.g., crime, unemployment); (6) legal rights and responsibilities of children (e.g., the effects of various laws on the roles and experiences of children within the social system); and (7) social change (e.g., changes in sex roles, family patterns, racial integration).

While the two superordinate categories just described refer to studies of general influences of the community and society, there is another important kind of research which focuses on specific services and intervention programs for children. Included in this category are studies on: (1) day care; (2) education (e.g., infant education, special education, preschool education); (3) health and medical services (e.g., preventive health services, pre- and

postnatal health care, nutrition programs); (4) welfare services (e.g., foster care, adoptive services, prevention of child abuse); (5) delinquency treatment or prevention services (e.g., programs designed to enforce legal requirements relating to children, including school attendance, or to provide legal aid to children).

Finally, research activity relating to children's services and intervention programs will be broken down further according to the type of educational curriculum, teaching technique and delivery system.

CHAPTER III

AN ANALYSIS OF THE OVERALL FY '75 FEDERAL EFFORT IN EARLY CHILDHOOD RESEARCH AND DEVELOPMENT

This chapter presents a description and analysis of the combined early childhood research of the agencies on the Interagency Panel on Early Childhood Research and Development. The data are derived from the Interagency Panels' Information System (see Chapter I and Appendix C for explanations of the structure and operation of this system), which contains information about 3,498 projects active in FY '75, representing $359.1 million in funding. Since the information system is shared by both Interagency Panels, it covers research spanning the age range from prenatal to late adolescence. Of the total number of projects in the system, 2,657 relate to early childhood (prenatal to ten years of age), funded for $304.8 million.[1] Many of these 2,657 projects are not focused exclusively on children under ten years of age, however, and also include older children and adolescents among their research samples and target groups. Actually, of the 2,657 projects which pertain to children, only 1,155 focus exclusively on children under 10 years of age.

This analysis of FY '75 early childhood research covers activities administered through 21 Federal agencies or departments (including seven subdivisions of the Office of Education). Table 1 indicates the amount of FY '75 early childhood research activity for each agency. Note that in this table, as in all other tables in this chapter except for tables 2, 3, and 19, both the number of projects and the amount of funding are indicated for the selected categories of research activity. In interpreting these data, however, it should be kept in mind that projects vary significantly in terms of funding, both within and across agencies. (The costs of the FY '75 projects range from as low as $10,000 and under, to more than $1,000,000). As a result, for a particular category of research the percentage shown in the projects and funding

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[1]These two figures, 2657 and $304.8 million, are used as the denominators in deriving the percentages shown in all of the tables and figures presented in this chapter.

Table 1

Distribution of FY '75 Federal Early Childhood Research, by Agency, Projects, and Funding

Agency	Projects[d] No.	Projects[d] %[a]	Funding[d] Amt.[b]	Funding[d] %[c]
Office of Child Development (OCD)	190	(7.2)	28.3	(9.3)
Assistant Secretary for Planning and Evaluation (ASPE)	1	(.04)	.007	(.0)
Social and Rehabilitation Service (SRS)	11	(.4)	1.2	(.4)
Rehabilitation Service Administration (RSA)	11	(.4)	.03	(.01)
National Institute of Child Health and Human Development (NICHD)	246	(9.3)	22.3	(7.3)
National Institute of Neurological and Communicative Disorders and Stroke (NINCDS)[e]	103	(3.9)	7.3	(2.4)
National Institute of Mental Health (NIMH)[e]	400	(15.1)	15.4	(5.1)
National Institute on Drug Abuse (NIDA)	28	(1.1)	3.0	(1.0)
National Institute on Alcohol Abuse and Alcoholism (NIAAA)	17	(.6)	1.2	(.4)
Bureau of Community Health Services (BCHS)	84	(3.2)	5.4	(1.8)
National Institute of Education (NIE)	296	(11.1)	37.8	(12.4)
Office of Education (OE)	1236	(46.5)	188.5	(61.8)
OE, Bureau of Education for the Handicapped (BEH)	329	(12.4)	43.2	(14.2)
OE, Office of Indian Education (OIE)	122	(4.6)	10.4	(3.4)
OE, Right to Read Effort	112	(4.2)	.9	(.3)
OE, Bureau of School Systems (BSS)	535	(20.1)	115.8	(38.0)
OE, Bureau of Occupational and Adult Education (BOAE)	62	(2.3)	3.0	(1.0)
OE, Office of Career Education (OCE)	58	(2.2)	7.1	(2.3)
OE, Office of Planning, Budgeting, and Evaluation (OPBE)	18	(.7)	8.0	(2.6)
U.S. Department of Agriculture (USDA)	56	(2.1)	.4	(.1)
U.S. Department of Labor (DOL)	3	(.1)	.2	(.1)
Law Enforcement Assistance Administration (LEAA)	13	(.5)	3.0	(1.0)

[a] Percentage of total number of early childhood projects (2,657).

[b] In millions of dollars.

[c] Percentage of total amount of early childhood funding ($304,753,993).

[d] Of the 190 projects ($28.3 million) shown for OCD, 38 projects were coded after the FY '75 data were entered into the system. While these additional projects (and their funding) are reflected in the totals shown for OCD, they are not included in the figures for the total Federal early childhood effort (2,657 projects, $304.8 million), which were used to compute all percentages. For this reason, the agency percentages sum to slightly more than 100 percent.

[e] Intramural research for NIMH (22 projects) and NINCDS (13 projects) is reflected in the projects columns, but not in the funding columns.

columns may differ considerably. For instance, the 329 projects from BEH which are reflected in this year's report represent about 12% of the total number of projects from all agencies, and about $43 million in funding, or 14% of the total funding. In contrast, the 400 projects for NIMH, which similarly represent about 15% of all of the projects, account for only $15 million, or 5% of the total funding.

Of the 2,657 early childhood projects, 2,187 projects are supported through grants, 371 through contracts, 52 through agreements (e.g., inter-agency agreements or procurement orders), and 47 through intramural programs. About a third of the projects (917) were new in FY '75, with 1740 projects continued from prior fiscal years. The majority of the projects are independent projects (2162), while 419 are separately funded components of broad programs, and 76 are broad research programs that include more than one study or project.

In the tables that follow, FY '75 early childhood research is examined in terms of the selected categories and sub-categories which were outlined in Chapter II. In most tables the categories are not mutually exclusive. That is, a project may pertain to two (or many more) categories such as physical development and cognitive development, and accordingly will be reflected in the figures presented for each of these categories. Consequently in most tables the individual percentages sum to more than 100%. In certain cases, however, categories are mutually exclusive. For each project included in the information system, a primary focus has been identified. Even if a project involves an investigation of several factors (e.g., cognitive development, socioemotional development, and day care), only the one factor considered by the coder to be most central to the purpose of the study is designated as the primary focus. For projects that focus on more than one factor, a single secondary focus is selected in a similar fashion. (Not all projects have a secondary focus, however.)

Finally, categories pertaining to kind of research are also mutually exclusive. Each project has been classified according to the one kind of research that best describes it: basic, applied, evaluation, research support and utilization, and policy research. (See Chapter II for definitions of these different kinds of research.)

Major Areas of Research

Table 2 offers the most general and comprehensive picture of the distribution of FY '75 early childhood research across major content areas. The

Table 2

Distribution of FY '75 Early Childhood Projects, by General Research Category, and Focus

Category	As Primary Focus of Study		As Secondary Focus of Study		Included in General Focus of Study	
	No.	%[a]	No.	%[a]	No.	%[a]
The Developmental Processes	650	(24.5)	423	(15.9)	1628	(61.3)
Physical Development	271	(10.2)	96	(3.6)	664	(25.0)
Cognitive Development	225	(8.5)	112	(4.0)	813	(30.6)
Socioemotional Development	92	(3.5)	106	(4.0)	822	(30.9)
The Family	80	(3.0)	151	(5.7)	520	(19.6)
The Neighborhood/Community	10	(.4)	14	(.5)	85	(3.2)
The Broader Social Environment	26	(1.0)	126	) 4.7)	409	(15.4)
Health and Welfare Services	309	(11.6)	189	(7.1)	598	(22.5)
Day Care	21	(.8)	2	(.08)	47	(1.8)
Health Care	176	(6.6)	174	(6.5)	464	(17.5)
Welfare	64	(2.4)	3	(.1)	124	(4.7)
Educational Services	1438	(54.1)	124	(4.7)	1619	(60.9)
Special Education	289	(10.9)	13	(.5)	322	(12.1)
Early Childhood Education	83	(3.1)	20	(.8)	233	(8.8)
Elementary Education	475	(17.9)	22	(.8)	803	(30.2)
Secondary Education	12	(.5)	11	(.4)	321	(12.1)
Post-Secondary Education	2	(.08)	2	(.08)	19	(.7)
Alternative Education	8	(.3)	3	(.1)	26	(1.0)
Juvenile Justice Services	44	(1.7)	0	(.0)	58	(2.2)
Study of Research Methods	100	(3.8)	66	(2.5)	286	(10.8)

Note. As primary or secondary focus, categories are mutually exclusive, with the exception that a category subsumes any other categories indented immediately below it. Categories are not mutually exclusive when they refer to areas included within the general focus.

[a]Percentage of total number of early childhood projects (2657).

table shows the number and percentage of projects in which each area is the primary focus, the secondary focus, and included within the general focus. For example, it can be seen that 271 projects focus primarily on physical development, while in an additional 96 projects physical development is the second most salient factor. On the other hand, there are 664 projects in all that include physical development as a factor (either major or peripheral).

Three of the general categories (developmental processes, health and welfare services, and educational services) are broken down into subcategories. It can be seen that the figures shown for the subcategories do not sum to the figures shown for the general categories. In the case of the primary focus and secondary focus columns, the subcategory figures sum to less than the general category figures. While the subcategories are mutually exclusive, the superordinate category figures include the sum of the figures shown for the subcategories plus a number of projects which were classified at a general level only. In the case of the general focus columns, the subcategories sum to more than the figure shown for the superordinate categories. The reason for this is that the categories are not mutually exclusive; a project may be counted in more than one category or subcategory.

In terms of the primary focus of the projects, by far the largest number of studies concern education-related issues (1438 projects, or 54% of all early childhood research). Naturally, most of the educational research (475 projects) focuses on children in grades one through six, with 83 projects relating to preschool education, and only 14 projects relating to secondary and post-secondary education. (Most research projects with a primary focus on secondary education would not include children younger than 10 in their sample populations; thus they would be classified as research on adolescents and would be covered in the annual report of the Interagency Panel for Research and Development on Adolescence). Note also that a substantial amount of educational research focuses primarily on special education (289 projects).

By comparing the different columns in Table 2 it can be seen that when educational issues are included in the general focus of a study (1619 projects), they usually are also the primary focus of the study. In other words, if education is studied at all, it is generally a main point of the project. The same is not true for any other category, with the exception of juvenile justice. For instance, as a primary focus the developmental processes are

included in only 650 projects, a much smaller number than is the case with education. On the other hand, the developmental processes are included in the general focus of 1,628 projects, surpassing any other category, including education. Thus, the developmental processes are studied in a large number of projects, but often within the context of a more general focus, such as the family, health/welfare services, or educational services.

A similar amount of attention is given to each of the three kinds of developmental processes, with physical development included in the general focus of 25% of the projects, cognitive development in 31%, and socioemotional development in 31%. As the primary focus of the study, however, physical development receives the most attention (10%), while socioemotional development falls to 3.5%. In other words, as a concomitant variable, socioemotional development is examined as often as the other two developmental processes, but as the key variable it is examined significantly less often.

Moving down the table to research on the family, it can be seen that the family is a factor of secondary interest in 151 projects, and of primary interest in only about half as many projects, similarly reflecting more concern for the family as a background factor than as a primary issue in itself. However, the family is included in the general scope of a substantial number of studies, represented in almost 20% of all early childhood research. This general pattern continues to hold true for research on the neighborhood and on the broader social environment. Relatively few projects (1.4%) focus primarily on the issues relating to these less immediate aspects of the child's environment, but 3% of all early childhood projects pertain in some way to neighborhood factors and slightly more than 15% to elements of the broader social environment.

Health and welfare services do not receive nearly as much attention as do educational services, but nevertheless they are the subject of a large number of investigations. Health care receives most attention; it is the primary focus of 7% of the early childhood projects and is included within the general focus of almost 18% of all projects. It can be seen that in more than two-thirds of the cases where health care is the subject of research, it is the primary or secondary focus of the project. That is, health care is usually studied directly, and not as a peripheral variable. Welfare services are included in the general focus of research in almost 5% of the projects, and are the primary focus of a little more than 2% of the projects. Studies on

day care are less numerous, accounting for less than 2% of the early childhood projects, in terms of general focus.

Considerable interest in the study of methodology is evident in FY '75 research (included in more than 10% of the projects, and the primary focus of almost 4%).

Finally, about 2% of the projects address juvenile justice. The significant amount of activity showing up in this category indicates the broad age range of studies on juvenile justice. Even though many of the studies primarily concern adolescents, the delivery of services or design of curriculum is often extended to young children as well.

Kinds of Research

The distribution of the major kinds of research, defined in Chapter II, is indicated in Figures 2 and 3. It is immediately apparent that much more applied research is undertaken than basic research. Of the 2,657 early childhood projects, 63.6% are classified as applied, and 25.4% as basic. The proportion of applied to basic research is even greater when the amount of activity is gauged in terms of funding, reflecting among other things the higher costs of running intervention programs, or of collecting data outside of the laboratory. Evaluation research, support and utilization of research, and policy research combined account for the remaining 11.0% of the projects and 11.1% of the funding.

The need for more effective dissemination of research findings is recognized by funding agencies, researchers, practitioners, and research consumers. In 836 (32%) of the FY '75 project proposals, an explicit intent to include a dissemination phase or component is expressed (not shown in tables). A phase devoted to the planning of research is specified in 161 (6%) of the project proposals.

Table 3 allows a closer look at how the different kinds of research are distributed across major content areas. Note that the categories listed on the side of the table refer to only the primary focus of the project. It is clear that basic research is concentrated primarily at the top of the table. Almost 20% of all projects concern basic research on the developmental processes, while basic research on all other categories combined amounts to less than 6% of the projects. In the applied column, the pattern is reversed, with most of the applied research being undertaken in the areas of health and edu-

Figure 2

PER CENT OF TOTAL NUMBER OF EARLY CHILDHOOD RESEARCH PROJECTS BY KINDS OF RESEARCH, FY '75*

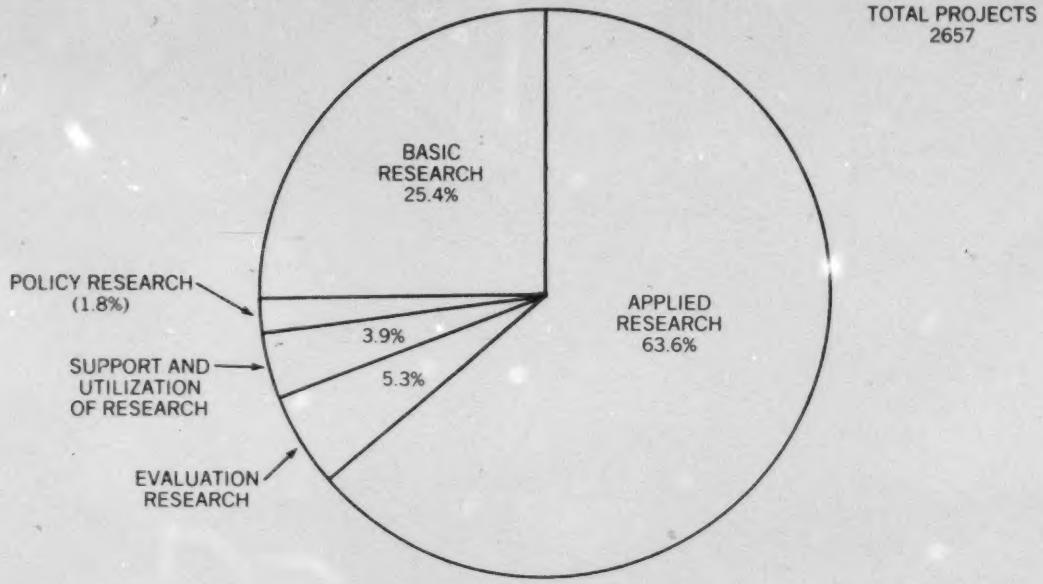
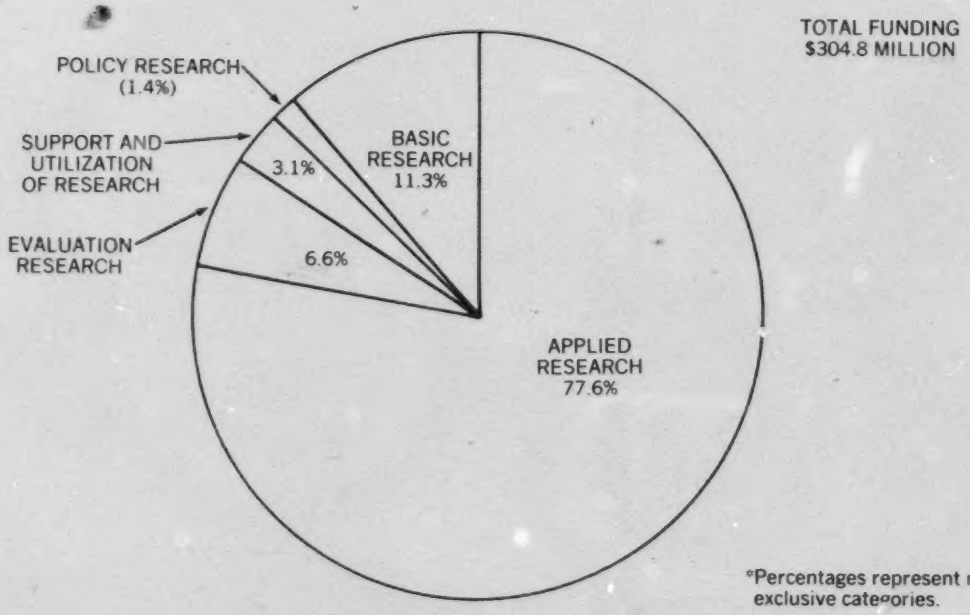


Figure 3

PER CENT OF TOTAL EARLY CHILDHOOD RESEARCH FUNDING BY KINDS OF RESEARCH, FY '75*



*Percentages represent mutually exclusive categories.

Table 3

Distribution of FY '75 Early Childhood Projects, by Primary Focus and Kind of Research

Primary Focus	Kind of Research				
	Basic	Applied	Evaluation	Support	Policy
Physical Development	217 (8.2%)	44 (1.7%)	5 (.2%)	5 (.2%)	0 (0%)
Cognitive Development	187 (7.0%)	30 (1.1%)	1 (.04%)	6 (.2%)	1 (.04%)
Socioemotional Development	76 (2.9%)	14 (.5%)	0 (0%)	1 (.04%)	1 (.04%)
Other General[a] Development	46 (1.7%)	13 (.5%)	0 (0%)	2 (.08%)	1 (.04%)
Family	57 (2.2%)	18 (.7%)	3 (.1%)	2 (.1%)	0 (0%)
Neighborhood/Community	4 (.2%)	2 (.08%)	1 (.04%)	1 (.04%)	2 (.08%)
Broader Social Environment	20 (.8%)	0 (0%)	1 (.04%)	1 (.04%)	4 (.2%)
Day Care	6 (.2%)	9 (.3%)	3 (.1%)	1 (.04%)	2 (.08%)
Health Services	11 (.4%)	115 (4.3%)	36 (1.4%)	5 (.2%)	9 (.3%)
Welfare	5 (.2%)	52 (2.0%)	5 (.2%)	1 (.04%)	1 (.04%)
Other General Services[a]	2 (.08%)	32 (1.2%)	6 (.2%)	5 (.2%)	3 (.1%)
Education	38 (1.4%)	1268 (47.7%)	62 (2.3%)	51 (1.9%)	19 ( )
Juvenile Justice Services	0 (0%)	36 (1.4%)	3 (.1%)	0 (0%)	5 (.2%)
Research Methods	6 (.2%)	58 (2.2%)	14 (.5%)	22 (.8%)	0 (0%)

Note. All categories are mutually exclusive. Percentage of total number of early childhood projects is shown in parentheses.

[a]Included in these categories are projects relating to the developmental process or to health/welfare services, but which could not be coded under a specific developmental process or a specific service, primarily because they were too general.

Table 4

FY '75 Early Childhood Research
on Physical Development,
by Category, Projects and Funding

Category	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Total Research on Physical Development	664	(25.0)	53.0	(17.4)
Physical Disease	189	(7.1)	14.1	(4.6)
Pregnancy and Childbirth	163	(6.1)	13.1	(4.3)
Motor Development	128	(4.8)	10.2	(3.4)
Physical Handicaps	117	(4.4)	11.5	(3.8)
Body Growth	107	(4.0)	7.7	(2.5)
Sensory Development	93	(3.5)	7.9	(2.6)
Genetics	65	(2.4)	7.0	(2.3)
Nutrition	57	(2.1)	4.6	(1.5)
Physical Characteristics	57	(2.1)	2.8	(.9)
Child Abuse/Neglect	40	(1.5)	5.2	(1.7)
Pharmacology	39	(1.5)	3.0	(1.0)
Drug Abuse	27	(1.0)	2.3	(.8)
Epidemiology	22	(.8)	1.5	(.5)
Injury/Accident	15	(.6)	2.0	(.6)
Alcohol Abuse	11	(.4)	.6	(.2)
Poisoning	2	(.1)	.7	(.2)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a]Percentage of total number of early childhood projects (2657).

[b]In millions of dollars.

[c]Percentage of total amount of early childhood funding ($304,753,993).

cation services. The remaining applied studies are distributed fairly evenly across all of the other categories.

Evaluation, support and policy studies similarly are evenly distributed across content areas, except for a large concentration in the area of education.

Developmental Processes

The general figures for research on the developmental processes have been presented in Table 2. A much more detailed picture of research in these general areas can be obtained from Tables 4, 5, and 6. Table 4 presents a breakdown of research on physical development, with the subcategories ranked according to number of projects. In this table, as in the ones that follow it, the categories refer to the general focus of the projects, and thus are not mutually exclusive. A large number of the projects on physical development concern physical disease and pregnancy and childbirth. Motor development, physical handicaps, body growth, and sensory development also receive considerable attention. More specific topics, such as drug abuse and injuries, are dealt with in a smaller number of studies. It is apparent that ranking these areas by the amount of funding rather than the number of projects would change the order very little, indicating that the costs of research in these different areas are generally proportional.

Over half of the research on cognitive development, which is broken down in Table 5, relates in some way to cognitive achievement (433 projects). This relatively high figure reflects the frequent use of achievement tests as a means of evaluating the impact of intervention programs, more than it does direct investigation of factors that impinge on cognitive achievement. Considerable activity is also apparent in the area of language development (almost 10% of all early childhood research). Of these 264 projects on language, 92 concern communication skills and language usage, 76 concern language acquisition, and 51 the structure and content of language. Perception, intellectual handicaps and learning receive a substantial amount of attention, while memory, problem solving, attention, concept formation and reading are studied in about the same percentage of projects (between 2% and 3%). The 52 projects on reading primarily concern the cognitive processes that underlie reading abilities. This relatively small number contrasts with the large number of studies (470) oriented toward reading curricula (as indicated in Table 13). Finally, only a few studies address questions about creativity or are directed toward

Table 5

FY '75 Early Childhood Research
on Cognitive Development
by Category, Projects and Funding

Category	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Total Research on Cognitive Development	813	(30.6)	60.8	(19.9)
Cognitive Achievement	433	(16.3)	34.9	(11.4)
Language	264	(9.9)	17.8	(5.8)
Perception	179	(6.7)	13.4	(4.4)
Intellectual Handicaps	116	(4.4)	9.8	(3.2)
Learning	104	(3.9)	8.9	(2.9)
Memory	77	(2.9)	5.2	(1.7)
Problem Solving	70	(2.6)	4.4	(1.4)
Attention	60	(2.3)	3.7	(1.2)
Concept Formation	59	(2.2)	3.4	(1.1)
Reading	52	(2.0)	2.1	(.7)
Creativity	7	(.3)	.4	(.1)
Computer Simulation of Thought	5	(3.5)	.1	(.03)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a]Percentage of total number of early childhood projects (2657).

[b]In millions of dollars.

[c]Percentage of total amount of early childhood funding ($304,753,993).

Table 6

FY '75 Early Childhood Research
on Socioemotional Development,
by Category, Projects and Funding

Category	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Total Research on Socioemotional Development	822	(30.9)	86.3	(28.3)
Perception of Self	378	(14.2)	57.0	(18.7)
Emotional Development	189	(7.1)	13.8	(4.5)
Attitudes	184	(6.9)	19.7	(6.5)
Social Behavior	169	(6.4)	11.4	(3.7)
Interpersonal Relationships	134	(5.0)	11.1	(3.6)
Personality	77	(2.9)	5.5	(1.8)
Motivation	67	(2.5)	4.2	(1.4)
Development of Values/Morals	38	(1.4)	2.9)	(.9)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a]Percentage of total number of early childhood projects (2657).

[b]In millions of dollars.

[c]Percentage of total amount of early childhood funding ($304,753,993).

computer simulation of intellectual processes.

Table 6 indicates that a large portion of the studies on socioemotional development touch on the perception of self (378 projects). This figure, and the disproportionately high funding figure for this category, reflect the current emphasis in many service and intervention programs on assessing the child's self-concept as one means of gauging the impact of the program. In most of these studies, however, self-concept is not the primary area of concern. (Recall the relatively small number of projects with a primary focus on socioemotional development.) Emotional development (e.g., alienation, anxiety, emotional illness), attitudes (e.g., towards work or school, racial), social behavior, and interpersonal relationships are at issue in approximately the same percentage of studies (5% to 7%) while personality characteristics, motivation, and values/morals are investigated less often (under 3%).

The critical need for investigations of the interrelationships between developmental processes was raised in Chapter II. While the data presented in Tables 4, 5, and 6 do not address this issue, relevant information can be obtained in other ways. In terms of the general focus of research, 199 of the early childhood projects were classified as relating to overall child growth and development (i.e., the composite pattern of physical, cognitive, social and emotional processes). Also of interest is the number of studies that have one of the developmental processes as a primary focus and another of the developmental processes as a secondary focus. FY '75 research includes only 53 such projects, a surprisingly low number considering that there are 588 projects with a primary focus on <u>one</u> of the developmental processes. Actually, many of the projects with a primary focus on one of the developmental processes do not have <u>any</u> secondary focus. Of the 271 projects with a primary focus on physical development, only 59 have a secondary focus; of the 225 projects with a primary focus on cognitive development, 68 have a secondary focus; of the 76 projects with a primary focus on socioemotional development, 39 have a secondary focus. In other words, most of the studies on the developmental processes (the majority of which involve basic research) are directed toward a specific process per se, and do not simultaneously address any larger context, either in terms of other developmental processes or environmental systems such as the family, community, or service program.

The 53 projects which do involve both a primary and secondary focus on developmental processes break down by areas as follows: Of the projects with

a primary focus on physical development, 7 have a secondary focus on cognitive development and 4 on social development; of the projects with a primary focus on cognitive, 11 have a secondary focus on physical, and 13 on social; and of the projects with a primary focus on social, 8 have a secondary focus on physical and 10 on cognitive. For the most part, then, the projects which focus on more than one developmental process are evenly distributed across the various combinations of processes.

Finally, it should be pointed out that, as can be derived from Tables 2 and 3, there are 62 projects with a primary focus on developmental processes in general, which could not be classified under a particular process, such as cognitive, because their focus was on a more global concept of development.

The Family

Table 7 indicates the general pattern of research on the family, which is carried out in a total of 520 projects. A large portion of these studies concern parent training--the instruction of parents in child care practices, parenting skills, family life, and other subjects relating to family functioning. Parent-child relationships and parental roles both are also widely studied (about 6% of the early childhood projects). Interestingly, in contrast to the 157 projects concerned with parent-child relationships, in only 16 projects are sibling relationships investigated. The substantial number of projects (118) on family health are about equally divided between mental health and physical health. Child rearing practices are examined in about 3% of all projects, as are issues relating to family structure. Of these projects pertaining to family structure, 13 are concerned with the single parent family, 6 with the extended family, 5 with communes, 4 with adoptive or foster children, and 4 with the working mother. Furthermore, only 7 proposals specifically identify the nuclear family as a unit of concern, although presumably this is implicit in others. Finally, transactions between the family and external institutions or systems, and similarly the ecology of the home, are considered in about 2% of the FY '75 projects.

The Community and Society

Research on the neighborhood or community environment is relatively sparse (85 projects) as can be seen in Table 8. A little more than half of these

Table 7

FY '75 Early Childhood Research
on the Family,
by Category, Projects and Funding

Category	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Total Research on Family	520	(19.6)	49.0	(16.1)
Parent Training	195	(7.3)	20.8	(6.8)
Parent-Child Relationships	157	(5.9)	12.9	(4.2)
Parental Roles and Behavior	156	(5.9)	17.6	(5.8)
Family Health	118	(4.4)	9.9	(3.3)
Child Rearing	91	(3.4)	9.4	(3.1)
Family Structure	79	(3.0)	8.1	(2.7)
Family/Society Interface	58	(2.2)	4.5	(1.5)
Ecology of the Home	55	(2.1)	4.2	(1.4)
Sibling Relationships	16	(.6)	1.4	(.5)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a]Percentage of total number of early childhood projects (2657).

[b]In millions of dollars.

[c]Percentage of total amount of early childhood funding ($304,753,993).

Table 8

FY '75 Early Childhood Research
on the Neighborhood/Community Environment
by Category, Projects and Funding

Category	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Total Research on the Neighborhood/Community Environment	85	(3.2)	9.9	(3.3)
General Locale (e.g., inner city, rural)	43	(1.6)	2.7	(.9)
Facilities, Equipment and Materials	19	(.7)	1.1	(.4)
Housing Conditions	13	(.5)	.8	(.3)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a]Percentage of total number of early childhood projects (2657).

[b]In millions of dollars.

[c]Percentage of total amount of early childhood funding ($304,753,993).

projects take into consideration the general locale in which the child lives and functions.

Table 9 shows the distribution of research on aspects of the broader social environment. Two of the most frequently studied factors in this area are cultural influences and socioeconomic influences (5.2% and 4.0% of all projects, respectively). Note the substantial number of projects (119) classified as ecological. As indicated earlier in this report, no precise definition of ecological research is possible, and included among these projects are a variety of approaches and content areas. Coders were instructed to use this descriptor to tag studies of the natural, overall setting of children and of the interaction between settings and children.

Studied in fewer projects are the effects of social change (primarily the effects of changes in government policy), social crises, and the legal rights and responsibilities of children. Television is a variable in only ten projects, and religious factors in only five.

The distribution of research across general categories of social services and intervention programs is displayed in Table 10. In terms of number of projects, educational research is ranked above all other categories, accounting for over 60% of all of the early childhood projects. A more detailed breakdown of educational research by age/grade categories is shown. As might be expected, from kindergarten on, the higher the grade level the less numerous the studies. (Recall that due to the criteria for inclusion in this report, the research shown for those grades beyond the sixth grade does not represent the total Federal effort, but only those studies which include children in those higher grade levels and children under ten years of age. Thus, there is considerably more Federal research on secondary and post-secondary education, but it is described in the annual report of the Interagency Panel for Research and Development on Adolescence.)

A significant commitment to special education is also apparent in Table 10. (The 322 projects are distributed across the various age/grade levels). About 92 of these projects relate to mainstreaming, or the integration of special education into other educational programs.

Preschool education is included within the general focus of about 8% of the FY '75 projects, and infant education/stimulation programs are the subject of 41 projects.

Table 9

FY '75 Early Childhood Research
on the Broader Social Environment
by Category, Projects and Funding

Category	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Total Research on the Broader Social Environment	409	(15.4)	30.8	(10.1)
Cultural Influences	137	(5.2)	8.1	(2.7)
Ecological Studies	119	(4.5)	8.9	(2.9)
Socioeconomic Influences	107	(4.0)	8.2	(2.7)
Effects of Social Change	64	(2.4)	6.0	(2.0)
Government Policy Changes	31	(1.2)	1.9	(.6)
Desegregation	6	(.2)	2.4	(.8)
Changing Family Patterns	6	(.2)	.2	(.07)
Changing Employment Practices	4	(.2)	.1	(.03)
Changing Sex Roles	3	(.1)	.2	(.06)
Social Crises	46	(1.7)	4.9	(1.6)
Legal Rights and Responsibilities of Children	44	(1.7)	2.2	(.7)
Television	10	(.4)	.3	(.1)
Religious Environment	5	(.2)	.6	(.2)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a]Percentage of total number of early childhood projects (2657).

[b]In millions of dollars.

[c]Percentage of total amount of early childhood funding ($304,753,993).

Table 10

FY '75 Early Childhood Research
on Intervention Programs and Services
by Category, Projects and Funding

Category	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Education	1619	(60.9)	242.2	(79.5)
Grades K through 3	781	(29.4)	133.0	(43.7)
Grades 4 through 6	505	(19.0)	72.1	(23.7)
Special Education	322	(12.1)	43.4	(14.2)
Grades 7 through 9	308	(11.6)	43.9	(14.4)
Grades 10 through 12	248	(9.3)	35.2	(11.5)
Preschool	214	(8.1)	21.9	(7.2)
Infant	41	(1.5)	2.5	(.8)
Alternative Education	26	(1.0)	3.9	(1.3)
Post-Secondary	19	(1.0)	3.9	(1.3)
Health Services	464	(17.5)	66.6	(21.8)
Mental Health	236	(8.9)	48.4	(15.9)
Preventive	205	(7.7)	47.6	(15.6)
Pre- and Post-natal	41	(1.5)	2.0	(.7)
Nutrition Programs	26	(1.0)	2.8	(.9)
Alcohol Abuse Treatment and Prevention	11	(.4)	.7	(.2)
Family Planning	6	(.2)	.3	(.1)
Welfare Services	124	(4.7)	15.0	(4.9)
Advocacy	56	(2.1)	7.3	(2.4)
Child Abuse Prevention/Treatment	70	(2.6)	11.6	(3.8)
Foster Care	18	(.7)	1.7	(.6)
Emergency Services	15	(.6)	1.9	(.6)
Employment Services	10	(.4)	.8	(.3)
Adoptive Services	7	(.3)	.8	(.3)
Delinquency Treatment/Prevention	48	(1.8)	4.0	(1.3)
Day Care	47	(1.8)	3.7	(1.2)
Recreation	19	(.7)	1.5	(.5)
Law Enforcement	13	(.5)	1.8	(.6)

Note. Categories are not mutually exclusive; they have been ranked within the table and within the category divisions according to number of projects.

[a]Percentage of total number of early childhood projects (2657).

[b]In millions of dollars.

[c]Percentage of total amount of early childhood funding ($304,753,993).

Health services are also widely studied, accounting for slightly more than 17% of the early childhood research projects. Many of these studies focus on mental health (236 projects) and on preventive services, such as immunizations, screening or early diagnosis of physical or mental illness (205 projects).

A large portion of the studies on welfare services concentrate on child advocacy (56 projects) and on child abuse (70 projects). A relatively small amount of research shows up in the categories of foster care, emergency services, employment services and adoptive services (each under 1%).

The 48 studies shown for services addressed to delinquency relate primarily, for this age group, to prevention components of programs, rather than to rehabilitation.

As can be seen in Table 11, in 312 of the projects on intervention programs, a major emphasis of the research was on the delivery of services (e.g., questions and issues relating to management and administration, auspices, staffing patterns, and structuring of the service). The distribution of research across areas generally parallels that shown in Table 10.

Table 12 presents information on the specific instructional techniques that figure in the educational research supported in FY '75. Clearly, individualized instruction is a favored approach. In all, 473 projects incorporate approaches in which effort is made to tailor curricula to the needs, abilities and problems of individual students (including those who are handicapped). Another major commitment is apparent in the area of bilingual instruction, which is the concern of 346 projects. The table shows less (but still substantial) activity relating to tutorial instruction, employed primarily for remedial purposes, and indicates that a significant number of studies examine other important educational innovations such as open classroom, team teaching, television instruction, volunteer community service, and cross-age tutoring.

Table 13 reveals that in 1,077 of the 1,496 education-related projects specific curricula are identified. Over half of these concern language arts (706 projects), which include language usage, vocabulary, spelling, composition, and reading. The subcategory of reading has been pulled out, showing the large proportion of studies which investigate this aspect of language arts (470 projects). Another basic educational skill--math--also is involved in a large number of studies (422 projects).

Table 11

FY '75 Early Childhood Research
on the Delivery of Services,
by Category, Projects and Funding

Category	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Total Research on Delivery Systems	312	(11.7)	44.2	(14.5)
Delivery of Education Services	179	(6.7)	30.1	(9.9)
Delivery of Special Education Services	76	(2.9)	16.5	(5.4)
Delivery of Health Services	70	(2.6)	5.8	(1.9)
Delivery of Welfare Services	57	(2.1)	7.5	(2.5)
Delivery of Justice Services	32	(1.2)	1.9	(.6)
Delivery of Day Care Services	16	(.6)	1.1	(.4)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a]Percentage of total number of early childhood projects (2657).

[b]In millions of dollars.

[c]Percentage of total amount of early childhood funding ($304,753,993).

Table 12

FY '75 Early Childhood Research on Education, By Instructional Technique, Projects and Funding

Instructional Technique	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Total Research on Instructional Techniques	1040	(39.1)	174.8	(57.3)
Individualized Instruction	473	(17.8)	69.7	(22.9)
Bilingual Instruction	346	(13.0)	65.0	(21.3)
Tutorial Instruction	98	(3.7)	6.3	(2.1)
Open Classroom	47	(1.8)	6.7	(2.2)
Team Teaching	46	(1.7)	4.4	(1.4)
Television Instruction	44	(1.7)	14.5	(4.8)
Volunteer Community Service	44	(1.7)	2.5	(.8)
Cross-age Teaching	41	(1.5)	3.3	(1.1)
Peer Teaching	22	(.8)	2.1	(.7)
Non-graded Instruction	16	(.6)	1.7	(.5)
Voucher System	8	(.3)	2.9	(.9)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a]Percentage of total number of early childhood projects (2657).

[b]In millions of dollars.

[c]Percentage of total amount of early childhood funding ($304,753,993).

Table 13

FY '75 Early Childhood Research on Education, by Type of Curriculum, Projects and Funding

Category	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Total Research on Curriculum	1077	(40.5)	179.7	(59.0)
Language Arts	706	(26.6)	128.5	(42.2)
Reading	470	(17.7)	78.6	(25.8)
Math	422	(15.9)	93.0	(30.5)
Cultural Awareness	388	(14.6)	69.7	(22.9)
Health Education	195	(7.3)	47.9	15.7)
Social Studies	177	(6.7)	35.2	(11.5)
Science	127	(4.8)	26.0	(8.5)
Fine Arts	116	(4.4)	18.8	(6.2)
Career Education	104	(3.9)	11.3	(3.7)
Physical Education	56	(2.1)	8.4	(2.7)
Vocational/Technical Education	52	(2.0)	5.3	(1.8)
Drug Abuse Education	27	(1.0)	2.1	(.7)
Environmental Studies	17	(.6)	3.4	(1.1)
Education for Parenthood	13	(.5)	2.1	(.7)
Sex Education	4	(.1)	.4	(.1)
Citizenship Training	3	(.1)	.1	(.03)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a]Percentage of total number of early childhood projects (2657).

[b]In millions of dollars.

[c]Percentage of total amount of early childhood funding ($304,753,993).

Considerable research activity also is being undertaken on ways in which cultural awareness can be infused into educational curricula (388 projects). Often undertaken in conjunction with bilingual instruction, the general intent of these efforts is to develop curricula relating to the heritage and values of various cultures, for the benefit of the specific ethnic groups and all children enrolled in such classes. Curricula in the traditionally emphasized areas of health education, social studies, science and fine arts continue to receive a good deal of attention (within the range of 100 to 200 projects).

The 104 projects involving career education curricula reflect increasing interest in extending into the younger grade levels efforts to acquaint children with adult work roles and options.

Parent involvement in intervention programs (not shown in tables) is high, occurring in 861 projects. In 244 of these projects, parents actually receive training for some kind of staff participation. In most of the other projects, their participation is less formal, and often involves service on advisory councils.

Research on the Research Process

Table 14 reveals that in about 11% of the FY '75 projects, some aspect of the research process itself is an issue of concern. Much of this activity is directed toward the development or refinement of assessment instruments, primarily for the evaluation of individuals, but also to a significant extent, of program impact, and to a much lesser extent, of the effects of specific treatment methods, teaching techniques and materials. Work on the development of techniques of classifying for storage and retrieval information about events, behavior, or settings, is carried on in 70 projects. Very few investigators explicitly set out to examine methods of statistical analysis (32 projects), or techniques of behavior observation (14 projects).

The figures discussed immediately above refer to the frequency with which the research methods themselves are actually under study. The figures are quite different, of course, with respect to the frequency with which a particular method is merely used, and not necessarily an object of study. (These figures, discussed below, are not shown in the tables.) Not supris-

Table 14

FY '75 Early Childhood Research
on the Research Process,
by Category, Projects and Funding

Category	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Total Research on the Research Process	286	(10.8)	23.5	(7.7)
Tests and Measures	209	(7.9)	15.4	(5.0)
For Evaluation of Individuals	118	(4.4)	9.4	(3.1)
For Program Evaluation	78	(2.9)	5.1	(1.7)
For Treatment/Technique Evaluation	30	(1.1)	2.6	(.8)
Techniques of Classifying Data	70	(2.6)	7.4	(2.4)
Statistical Analysis	32	(1.2)	2.1	(.7)
Behavior Observation Techniques	14	(.5)	2.9	(1.0)
Study of Research Bias	10	(.4)	.7	(.2)
Cultural/Ethnic Bias	5	(.2)	.6	(.2)
Effect of Setting/Research Agent	3	(.1)	.5	(.1)

Note. Categories are not mutually exclusive; they have been ranked within the table and within the category divisions according to number of projects.

[a]Percentage of total number of early childhood projects (2657).

[b]In millions of dollars.

[c]Percentage of total amount of early childhood funding ($304,753,993).

ingly, over 40% of the projects involve a pretest/posttest design. Case studies of individuals, on the other hand, are involved in only 25 projects. According to the project proposals, questionnaires are used in 407 studies, interviews in 389 studies, and observational methods in 312 studies. (Recall, however, that in only 14 of these projects is the development or refinement of the observational technique an issue in itself.) Surveys are used to collect data in 181 of the early childhood projects.

Despite the widespread recognition of the merits of multidisciplinary approaches to research on children, in only 101 (3.8%) of the FY '75 project proposals is there expressed a clear intent to draw instruments, methods and staff from more than one discipline.

Finally, a longitudinal design is specified in 286 studies in FY '75. Table 15 indicates the primary focus of the studies employing longitudinal methods. The bulk of this research concerns the development processes (127 projects) or educational issues (98 projects). The only other areas in which longitudinal approaches are used frequently are the family (15 projects) and health care (20 projects).

Research Target Groups

Table 16 presents information about the ages of the children included in the samples or target groups of the FY '75 projects. Over half of the projects involve children in the range of kindergarten through fourth grade. Preschool age children also are studied frequently, included within the target groups of a little more than 25% of the projects. Continuing interest in infancy is evident, as infants under a year of age constitute the next most popular age group, accounting for almost 20% of the research on children. Also as in previous years, one- and two-year-olds receive less attention (411 projects) than any other age category, with the exception of the prenatal period, which is included in the focus of 142 projects.

Actually, there is considerable overlap between the research activities shown for these age categories. That is, many of the FY '75 projects include children from several of these age ranges within their target groups. For instance, of the 1,538 projects involving children in kindergarten through

Table 15

Distribution of FY '75 Early Childhood Projects With Longitudinal Design, by Primary Focus, Projects, and Funding

Category	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
All Areas Combined	286	(10.8)	23.0	(7.5)
The Developmental Processes	127	(4.8)	7.8	(2.6)
Physical Development	39	(1.5)	2.9	(1.0)
Cognitive Development	36	(1.4)	2.0	(.7)
Socioemotional Development	29	(1.1)	1.8	(.6)
The Family	15	(.6)	1.0	(.3)
The Neighborhood/Community	1	(.04)	.2	(.1)
The Broader Social Environment	4	(.2)	.1	(.04)
Health and Welfare Services	30	(1.1)	4.4	(1.4)
Day Care	2	(.1)	.1	(.04)
Health Care	20	(.8)	1.7	(.6)
Welfare	2	(.1)	.4	(.1)
Educational Services	98	(3.7)	8.9	(2.9)
Juvenile Justice Services	3	(.1)	.2	(.07)
Study of Research Methods	8	(.3)	.4	(.1)

Note. All categories are mutually exclusive.

[a]Percentage of total number of early childhood projects (2657).

[b]In millions of dollars.

[c]Percentage of total amount of each childhood funding ($304,753,993).

Table 16

FY '75 Early Childhood Research,
by Age Group, Projects and Funding

Category	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Kindergargen through Fourth Grade	1538	(57.9)	195.6	(64.2)
Preschool (Three and Four Year-Olds)	680	(25.6)	67.5	(22.1)
Infancy (Birth to One Year)	505	(19.0)	43.6	(14.3)
One to Three Years	411	(15.5)	36.6	(12.0)
Prenatal	142	(5.3)	8.0	(2.6)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects. Not reflected in this table are 716 (26.9%) of the early childhood projects, for which information on particular age ranges (other than childhood in general) was not available.

[a]Percentage of total number of early childhood projects (2657).

[b]Percentage of total amount of early childhood funding ($304,753,993).

fourth grade, 506 also include children of preschool age and younger. Even more telling, of the 505 studies on infancy, only 185 pertain exclusively to infants (birth to one year), and of the 411 studies on one- to three-year-olds, only 55 deal exclusively with two-year-old children, and only 24 deal exclusively with one-year-olds.

Table 17 provides a breakdown of FY '75 early childhood research in terms of sample characteristics relating to socioeconomic status, race or ethnic group, and environmental setting. About 20% of the projects draw their samples at least in part from low-income populations. In 7% of the projects the sample is specifically identified as mixed economically, and in only 3% of the studies are children identified as middle class. This last figure does not provide a realistic estimate of the amount of research on middle class children, but merely indicates that when non-poor children are to be involved in a project, information about socioeconomic background is often omitted entirely from the proposal. Note that about 75% of the projects present no information whatsoever on socioeconomic status.

Information also is often insufficient with regard to race/ethnic groups and environmental setting. (Information is not provided in 61% and 72% of the projects, respectively.) The figures given for research relating to white children and to urban and suburban areas certainly would be much higher if the appropriate information were available.

Finally, Table 18 indicates the frequency with which children with special characteristics are included among the target groups. Physically handicapped children are involved in 366 projects, with the largest percentages of projects directed toward the aurally, neurologically, and speech handicapped (about 4% to 5% in each case), but with significant levels of activity also directed toward the visually handicapped, multihandicapped, and orthopedically handicapped (about 3% in each case).

Research on the intellectually handicapped is divided between the mentally retarded (8% of all projects) and children with learning disabilities (6%), with emotionally disturbed children receiving attention in a similar percentage of projects (about 9%). In FY '75 101 projects on abused or neglected children were funded. Delinquent children are the concern of relatively few projects, which is not surprising given the age range of

Table 17

FY '75 Early Childhood Research
by Demographic Category, Projects and Funding

Category	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Socioeconomic Status[d]				
Primarily Poor	526	(19.8)	89.0	(29.2)
Mixed Economically	192	(7.2)	28.7	(9.4)
Middle Class	78	(2.9)	5.2	(1.7)
Race or Ethnic Group[e]				
Spanish-Surnamed	405	(15.2)	74.2	(24.3)
Black	306	(11.5)	34.5	(11.3)
White	303	(11.4)	25.7	(8.4)
American Indian	245	(9.2)	23.5	(7.7)
Other Groups	112	(4.2)	15.4	(5.0)
American Oriental	38	(1.4)	6.3	(2.1)
Environmental Setting[f]				
Urban	433	(16.3)	61.5	(20.2)
Rural	222	(8.4)	23.0	(7.5)
Indian Reservation	105	(4.0)	8.5	(2.8)
Inner City	77	(2.9)	7.6	(2.5)
International	44	(1.7)	3.5	(1.2)
Suburban	43	(1.6)	5.8	(1.9)
Migrant	14	(.5)	6.5	(2.1)

Note. Categories are not mutually exclusive; they have been ranked within major divisions of the table according to number of projects.

[a]Percentage of total number of early childhood projects (2657).

[b]In millions of dollars.

[c]Percentage of total amount of early childhood funding ($304,753,993).

[d]Does not reflect 1975 (74.3%) of early childhood projects, for which information on SES was not available or not applicable.

[e]Does not reflect 1609 (60.6%) of early childhood projects, for which information on race/ethnic group was not available or not applicable.

[f]Does not reflect 1901 (71.5%) of early childhood projects, for which information on setting was not available or not applicable.

Table 18

FY '75 Research on Children
With Special Characteristics
by Categories, Projects and Funding

Category	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Bilingual	386	(14.5)	70.0	(23.0)
Physically Handicapped	366	(13.8)	40.1	(13.2)
Aurally Handicapped	136	(5.1)	9.8	(3.2
Neurologically Handicapped	129	(4.9)	11.2	(3.7)
Speech Handicapped	109	(4.1)	9.3	(3.1)
Visually Handicapped	86	(3.2)	6.3	(2.1)
Multihandicapped	80	(3.0)	17.3	(5.7
Orthopedically Handicapped	69	(2.6)	5.4	(1.8)
Intellectually Handicapped	322	(12.1)	29.2	(9.6)
Mentally Retarded	214	(8.1)	22.0	(7.2)
Learning Disabled	159	(6.0)	12.8	(4.2)
Emotionally Disturbed	229	(8.6)	16.0	(5.2)
Academically Slow	169	(6.4)	5.4	(1.8)
Physically Ill	98	(3.7)	6.3	(2.1)
Abused/Neglected	101	(3.8)	15.0	(4.9)
Delinquent	37	(1.4)	5.1	(1.7)
Gifted	15	(.6)	2.1	(.7)

Note. Categories are not mutually exclusive; they have been ranked within the table and within the category divisions according to number of projects.

[a]Percentage of total amount of early childhood projects (2657).

[b]In millions of dollars.

[c]Percentage of total amount of early childhood funding ($304,753,993).

prenatal to ten years. Finally gifted children are included within the samples or target groups of only 15 projects.

Tests and Measures in FY '75 Early Childhood Research

Specific tests or measures are named in 979 of the 2,657 early childhood project proposals. Not all of the names of these tests could be found in test and measure source books that were consulted. The 152 tests that were identified in source books are cited in the proposals of 743 projects, which are distributed across the major research areas as indicated in Table 19. Primary focus categories are listed down the left side of the table. The first column of figures indicates the total number of projects (regardless of whether specific tests are named) with each primary focus. This information has already been presented in Table 2. The next column indicates, for each primary focus, the number of project proposals in which tests and measures are specifically named. (Note that the figures in this column refer to number of projects, not tests.) The third column of figures presents, for each primary focus, the number of named tests that have been identified in source books. The last four columns indicate the number of identified tests that are used with different frequencies. For instance, the first row of figures in the table shows that of the 650 project proposals with a primary focus on the developmental processes, 148 specify the names of tests and measures to be used in the research. Of these tests that are named in the proposals, 77 were identified in source books. Finally, of these 77 tests, 30 tests are cited only once, 29 tests are cited 2 to 4 times (i.e., each of the 29 appears in 2 to 4 project proposals), 11 tests are cited 5 to 10 times, and 7 tests are cited more than 10 times.

It is apparent that, within each of the content areas, many of the tests that can be identified in reference books are named in only one project proposal. Within some areas (cognitive development, the family, health care, and education) there are also significant numbers of tests that are cited 2 to 4 times. Few tests are cited with frequencies of 5 to 10, or more than 10, except in the areas of the developmental processes or education.

The names of the tests which are cited in more than 10 project proposals are listed below, under the content area of the projects. The frequency with

Table 19

Distribution of Tests and Measures in FY '75
Early Childhood Research, by Primary Focus

Primary Focus	No. of Projects		No. of Identified Tests				
	Total	With Tests	Total	With Freq. of 1	With Freq. of 2-4	With Freq. of 5-10	With Freq. of over 10
Developmental Processes	650	148	77	30	29	11	7
Physical Development	271	30	29	20	7	2	0
Cognitive Development	225	57	45	21	19	3	2
Socioemotional Development	92	37	37	26	9	2	0
Family	80	34	22	12	8	2	0
Neighborhood	10	2	1	1	0	0	0
Broader Social Environment	26	1	1	0	1	0	0
Health/Welfare Services	309	61	41	22	11	5	3
Day Care	21	5	5	4	1	0	0
Health Care	176	40	36	20	10	6	0
Welfare	64	5	9	8	1	0	0
Educational Services	1,438	719	123	34	42	22	25
Special Education	289	142	64	27	24	7	6
Early Childhood Education	83	41	29	19	7	2	1
Elementary Education	475	353	76	22	26	11	17
Secondary Education	12	4	3	3	0	0	1
Post-Secondary Ed.	2	0	0	0	0	0	0
Alternative Education	8	0	0	0	0	0	0
Juvenile Justice	44	1	2	2	0	0	0
Study of Research Methods	100	13	18	14	4	0	0

Note. Identified tests are those tests named in the proposals, which could be located in the reference books consulted.

which each test is cited appears in parentheses. A complete list of all of the names of identified tests, and their frequencies (in research on children and adolescents), appears in Appendix E.

The Developmental Processes

Wechsler Intelligence Scale for Children (32); Peabody Picture Vocabulary Test (19); Stanford-Binet Intelligence Scale (17); Bayley Scales of Infant Development (15); Bender-Gestalt Test (12); Illinois Test of Psycholinguistic Ability (12); Wide Range Achievement Test (12).

Health and Welfare Services

Bayley Scales of Infant Development (17); Stanford-Binet Intelligence Scale (14); Wechsler Intelligence Scale for Children (12).

Educational Services

Metropolitan Achievement Tests (137); Stanford Achievement Test (82); Peabody Picture Vocabulary Test (76); California Achievement Test (61); Metropolitan Readiness Tests (52); Wide Range Achievement Test (52); Iowa Tests of Basic Skills (51); Tests of Basic Experiences (50); Comprehensive Tests of Basic Skills (40); Gates-MacGinitie Reading Tests (37); Boehm Test of Basic Concepts (34); California Basic Skills Test (32); Stanford-Binet Intelligence Scale (27); Illinois Test of Psycholinguistic Ability (25); Denver Developmental Screening Test (23); Slosson Intelligence Test (21); Wechsler Intelligence Scale for Children (21); Cooperative Primary Test (20); Bayley Scales of Infant Development (18); SRA Achievement Series (15); Bender-Gestalt Test (14); Vineland Social Maturity Scale (14); Otis Lennon Mental Ability Test (11); Stanford Diagnostic Reading Test (11); Stanford Early School Achievement Test (11).

Trends in Early Childhood Research: Selected Comparisons of FY '74 and FY '75 Activities

The total number of early childhood research projects included in the

Panels' information system increased from 2,307 (funded for $239.1 million) in FY '74, to 2,657 (funded for $304.8 million) in FY '75. This 15% increase in number of projects in the system and 27% increase in amount of funding must be taken into consideration when FY '75 figures are compared with FY '74 figures. Thus, an increase in the number of projects within a particular category of research does not necessarily indicate an actual shift in the emphases of the funding agencies, but may be an artifact of the enlarged data collection effort.

Another qualification must be kept in mind when comparing figures for the two years. Each year efforts are made to improve the coding scheme used to classify research activity for the information system. Changes also are made in order to better address emerging research areas and issues. Consequently, not all categories displayed in the tables in this report have exact counterparts in the FY '74 annual report. Apparent increases or decreases in level of activity which result primarily from shifts in classification procedures, rather than from actual changes in funding patterns, will not be considered in the following discussion.

General Areas of Research

The overall patterns of early childhood research in FY '74 and FY '75 are strikingly similar, in terms of amount and proportion of research within the selected categories. This is not surprising, considering that 1,493 of the 2,657 early childhood projects that are in the FY '75 information system are carried over from the FY '74 system.

Beginning with the general research categories listed in Table 2, the most salient changes from FY '74 to FY '75 are apparent in the categories of the developmental processes, the broader social environment, and justice. The number of projects which include the developmental processes within their general focus increases from 1,160 (50.3% of all FY '74 early childhood projects) to 1,628 (61.3% of all FY '75 early childhood projects). Also, there are more projects with a secondary focus on the developmental processes in the FY '75 information system, than there were in FY '74. On the other hand, with regard to the primary focus of studies, there is a decrease from FY '74 to FY '75 in the amount of activity on the developmental processes, the number

of projects dropping from 720 to 650 in the overall category, with similar drops occurring within each of the subcategories of physical, cognitive and socioemotional development. In other words, while the developmental processes are being examined more often as secondary or background factors in the early childhood projects on which information is collected, fewer studies actually concentrate on these processes.

Turning to factors in the broader social environment, we find a consistent increase from FY '74 to FY '75, in terms of primary, secondary and general focus. There are about twice as many projects which qualify in this category, with respect to each of the three kinds of focuses. Whereas aspects of the broader social environment were the primary focus of 13 projects, the secondary focus of 65 projects, and included within the general focus of 198 projects in FY '74, they were the primary focus of 26 projects, the secondary focus of 126, and included in the general focus of 409, in FY '75. This sharp increase in activity presumably reflects heightened interest in ecological research, and in investigating contributing and interactive influences of the environment as they impact on the child's behavior, family functioning, or the efficacy of intervention programs and the delivery of services.

An increase from FY '74 to FY '75 in research on issues pertaining to juvenile justice is also apparent with the number of projects rising from 17 to 58 (general focus).

The only other category in which a major increase can be seen is educational services. In FY '74, 1,197 projects had education as a primary focus and 1,416 included it within the general focus. The corresponding figures for FY '75 are 1,438 and 1,619. These additional education projects do not actually represent any change in effort within the educational research agencies, however. At the time the FY '74 project data were collected, information about 310 projects funded for over $59 million by the Division of Bilingual Education was not available from the agency, and consequently these projects were not reflected in the FY '74 figures. The projects funded by Bilingual Education in FY '75 are included, however, in the figures shown in this report, and account for most of the apparent increase.

With respect to the rest of the general categories of research shown in Table 2, there are no other notable increases. Research on the family appears

to be more extensive in FY '75, but this is only because parent education projects were classified under the family category in the FY '75 information system, whereas they had been counted under the education category in the previous year. Taking this into consideration, it can be seen that there are about the same number of projects concerned with family-related issues, over the last two fiscal years. Similarly, there are no major changes in the amount of research on the neighborhood, or on health/welfare services. In both of these areas, there are slight increases in terms of primary focus, but slight decreases in terms of general focus.

Kind of Research

Very little change is evident from FY '74 to FY '75 with regard to the balance between the various kinds of research supported by the member agencies (e.g., as illustrated in Figures 2 and 3). The amount of basic research drops only slightly, from 26% of all projects (and 13.8% of all funding) in FY '74 to 25.4% of all projects (and 11.3% of all funding) in FY '75. On the other hand, the proportion of applied research increases slightly over the two years, from 61.8% of all projects (and 73.9% of funding) in FY '74 to 63.6% of all projects (and 77.6% of funding) in FY '75.

Similarly, there is about the same level of activity relating to evaluation of early childhood programs (an insignificant decrease in percentage of projects, but a slight increase in percentage of funds). The number of projects and amount of funds drops slightly in the category of support and utilization of research. Policy research is shown as a discrete category for the first time in FY '75, so no comparison is possible.

An examination of the breakdown of kind of research by areas of primary focus (e.g., Table 3) reveals few differences between FY '74 and FY '75. The distribution of basic research over the different areas of primary focus is almost identical from the one year to the next (with the exception of slightly more projects focusing on health and welfare). Some differences show up in the balance of applied projects over the various areas. There are fewer applied projects focusing on the developmental processes in FY '75, dropping from 84 to 44 in physical development, 65 to 30 in cognitive development, and 46 to 14 in socioemotional development. On the other hand,

the number of applied projects on education is greater in FY '75, reflecting the addition of the bilingual education research.

The amount of support and utilization activities related to educational research drops from 108 projects in FY '74 to 51 projects in FY '75. The levels of activity are essentially constant over the two years in the remaining categories.

Developmental Processes

The increase in number of projects that include the developmental process within their general focus has been commented on above. Within the area of physical development, the most noticeable increments occur in the amount of research relating to motor development (from 84 to 128 projects) and physical handicaps (from 72 to 117 projects). Smaller increases occurred in the amount of research on physical diseases, pregnancy and childbirth, and sensory development. In contrast, the number of studies on body growth decreased from 141 projects in FY '74 to 107 projects in FY '75.

Much of the gain shown in the number of projects that pertain to cognitive development can be attributed to substantial increases in attention to language (from 178 to 264 projects) and intellectual handicaps (from 56 to 116 projects), and to a lesser extent, perception and reading.

The increase in the number of studies concerning socioemotional development stems largely from heightened interest in issues relating to self-concept, and from the inclusion of self-concept measures in a wide array of applied research projects. There are also more studies in FY '75 on emotional development, while the level of research on attitudes and on personality holds steady over the two fiscal years.

The Family

While there is not a significantly greater amount of activity in the general area of the family, changes are apparent in a number of sub-areas of family research, such as: family health (from 72 to 118 projects); child rearing practices (from 64 to 91 projects); the family/society interface (from 44 to 58 projects); and the ecology of the home (from 26 to 55 pro-

jects). While projects on family structure are fewer in FY '75 (from 93 to 79 projects), the amount of funds given to these projects rises from $5.3 million to $8.1 million. Finally, intrafamily relationships are studied less often in FY '75 (dropping from 203 to 157 projects).

The Neighborhood and the Broader Social Environment

The proportion of research on the neighborhood and the child's immediate physical environment (e.g., locale, housing condition) increased moderately in number of projects (from 74 to 85), and more significantly in amount of funding (from $4.5 million to almost $10 million). As indicated earlier, factors relating to the child's broader social environment are examined in more studies in FY '75. The largest increments appear in the areas of cultural and socioeconomic influences, social crises and changes, and legal rights of children. The amount of research on television dropped by about 50% from FY '74 to FY '75.

Research activities relating to intervention programs and services did not expand, but stayed at about the same level from FY '74 to FY '75, with slight decreases occurring in some areas. Specifically, less research on preschool education (from 259 to 214 projects) appears among the FY '75 studies.

There are also fewer studies pertaining to welfare services (from 210 to 124 projects), day care (from 69 to 47 projects), and recreation (from 30 to 19 projects).

Instructional techniques are examined in more projects in FY '75 than in FY '74, which is not surprising considering that there are more educational studies in the information system in FY '75. Almost all of this gain is accounted for by the increase in studies on techniques of bilingual instruction (from 69 to 346 projects). The only other apparent increase relates to team teaching (from 26 to 46 projects). Activity concerning other teaching techniques holds constant, with the exception of a drop in research on open schools (from 200 to 47 projects).

Research Target Groups

As indicated earlier, there are 350 more early childhood projects in

the information system for FY '75 than there were in FY '74. This increase is apparent across all of the major age levels: kindergarten through fourth grade (from 1,115 to 1,538 projects); preschool (from 488 to 680 projects); infancy (from 388 to 505 projects); one to three years (from 300 to 411 projects); and prenatal (from 96 to 142 projects). Not only are there more early childhood research projects in the FY '75 information system, a higher percentage of these projects provided specific information about the ages of the children included in the target groups (from 68% in FY '74 to 73.1% in FY '75), an encouraging trend in light of recent recommendations for more complete sample descriptions in research proposals as well as published reports.

No substantial changes (either in terms of absolute figures or proportion) are apparent in the various categories relating to socioeconomic status, race or ethnicity, or environmental setting. (See Table 17.) The one exception is an additional 255 projects involving Spanish-surnamed children, which is simply the result of including the bilingual education projects in the FY '75 data collection. The addition of the bilingual projects also pushed up the percentage of projects specifying information about race/ethnicity from 36% in FY '74 to almost 40% in FY '75. Unfortunately, in contrast to race/ethnicity, information about the socioeconomic status and environmental setting of target groups was specified in a smaller percentage of projects in FY '75 than in FY '74 (dropping from 31.2% to 25.7%, and from almost 40% to 29.5%, respectively.)

Finally, there were few major changes in the amount or proportion of research involving children with the different special characteristics listed in Table 18. The number of studies concerning bilingual children is higher, as has been explained, and the number of projects relating to physically ill children is down from 135 to 98. One category in which considerably more activity can be seen is abused/neglected children. While there were 26 projects ($2.9 million in funding) shown in the FY '74 annual report, the figures for FY '75 are 101 projects ($15 million in funding).

CHAPTER IV

AN ANALYSIS OF FY '75 EARLY CHILDHOOD RESEARCH, BY AGENCY

The FY '75 early childhood research of each of the agencies on the Interagency Panel is described and analyzed in this chapter. A list of the agencies was presented in Table 1 in Chapter III (along with the number of FY '75 early childhood projects and amount of funding for each agency). In the pages that follow, a separate section of the chapter is devoted to each agency. In these analysis sections, which have the same general format (with some minor variations to be explained below), key data are presented concerning the agencies' FY '75 early childhood research programs.

The analysis sections begin with the figures for the agency's FY '75 early childhood projects and funding. In most agencies, information was collected on all projects which were active in FY '75. These include projects which received funds in FY '75 and projects which did not, but were still operating on funds allocated in a prior fiscal year. While the latter kind of research activity is reflected in the project figures, the funding figures shown in the tables refer only to FY '75 monies.

A concise statement of the agency's fundamental mission with respect to early childhood research and development activity is also presented on the first page of each analysis section. Note that for many agencies, the early childhood mission may constitute only a part of their overall research mission, which also may relate to adolescents and adults. Following the mission statement is a brief description of some of the salient aspects of the agency's FY '75 research program.

The remaining portion of the analysis section is tabular, beginning with a bar chart illustrating the percentage of the agency's FY '75 early childhood research pertaining to each of 36 key research areas and target groups, and a table indicating the distribution of research according to five major kinds (or purposes) of projects: basic, applied, evaluation, research support and utilization, and policy research. When appropriate,

the agency's research activity is broken down further into selected sub-categories in the following general areas: (1) physical, cognitive and socioemotional development; (2) the family; (3) instructional techniques; (4) eductional curriculum; and (5) handicapped children. When an agency does not support a substantial amount of activity related to one of these general areas, the table (or section of the table) is omitted. Furthermore, within each table, a sub-category is omitted if none of the agency's projects pertain to it. Finally, information about the agencies' interests and plans for FY '76 and beyond, is presented within a chart in Appendix A.

Information was collected from the Department of Labor, but the data are not included in the following analysis sections because of the relatively small number of projects involved. The Department of Labor supports three projects in FY '75 in the area of childhood. One is an ongoing (since 1968) demonstration of an employer-sponsored day care model. The program objectives are to provide a model of employer-sponsored day care which will increase employee stabilization by reducing absenteeism and turnover, and fostering the personal growth of the parent-employers. Additionally, the program is to provide for the intellectual, social, emotional and physical development of the participants. At the present time, the center is in a state of redefining goals and policies. The principal objective for the coming year will be to provide a model for employer sponsored day care at unit costs which private employers would find reasonable. Another project is exploring the feasibility of integrating in-school Neighborhood Youth Corps enrollees into the staffs of day care centers. The purpose of this new work experience model is to: (1) facilitate development of effective work habits; (2) provide exposure to a number of career opportunities, including those in the field of child care; and (3) better prepare the participating youth for parental responsibilities. A third project, co-funded by NIE, will analyze statistically the results of five newly available surveys which provide data on the effect on economic success of family background, test scores prior to school completion, and personality traits in high school.

Office of Child Development,
Office of Human Development,
Office of the Secretary, DHEW

- FY '75 Funding of Early Childhood Research: $28.3 million
- Number of Early Childhood Research Projects Active in FY '75: 190
- Mission and/or Functions in Early Childhood Research:

The Office of Child Development advises within the Federal government on matters pertaining to the care and development of children and assists in the development of national policies and programs which have a significant impact on the well-being of children and their families. The Office develops information on problems and trends affecting child life, analyzes information on programs serving children, recommends and reviews legislative proposals in the area of early childhood development and child welfare, and provides leadership in the development of priorities and strategies for childhood research, demonstration, and experimental efforts. In addition, through such activities as the development of model legislation and standards, the provision of technical assistance, and the conduct of demonstration projects, OCD seeks to stimulate institutional changes at the Federal, State and local level in order to improve the delivery of services to children and families, particularly those children and families who are most at risk due to economic disadvantage or other vulnerabilities. Major programmatic activities conducted by the Office of Child Development are focused on meeting the developmental needs of preschool-age children from low-income families and on improving services to particular populations of vulnerable children such as the abused or neglected, children in foster care, children in need of adoptive homes, and children in institutions. OCD conducts a variety of research and demonstration activities designed to improve the quality of children's programs (e.g., day care, emergency services, etc.) and to measure their impact on the children and families served.

Description of FY '75 Early Childhood Research Activity

More than half of all of OCD's FY '75 early childhood projects are classified as applied research (62%). A significant number of these are demonstration projects (35%). Twenty-one percent of the research is categorized as basic research. OCD investigation continues to focus on all aspects of child development, especially as it occurs in the context of the family and the broader social environment. This is reflected in the substantial percentages shown in Figure 4 for the following categories: physical development (21%); cognitive development (25%); and socioemotional development (24%). Cognitive achievement, language development, perception of self and emotional development are the specific subcategories of research that figure most prominently in studies on the developmental processes (Table 21). These topics are most often examined in the context of the impact of intervention on child development.

Also apparent is OCD's concern for research relating to the Family (40%). This category includes those projects oriented toward the training of parents in child care and development. Along this line OCD has greatly increased its support of research on problems and services relating to the abused or neglected child (41%). The recently established National Center of Child Abuse administers a national network of demonstration and resource centers. This emphasis also is reflected in the figure for welfare services (50%) which includes studies of child advocacy services and studies designed to improve the identification, treatment and prevention of child abuse. Additional areas of research on the family are: parent-child relationships, parental roles and behavior, family structure and child rearing practices (Table 22).

Another important area of research effort concerns delivery systems and educational services relating to early childhood education.

Table 20

Distribution of OCD FY '75
Early Childhood Projects, by Kind of Research

Kind of Research	%[a]
Basic	21.1
Applied	61.6
Pilot Study	0.0
Development	16.7
Demonstration and/or Replication	34.9
Evaluation	6.8
Research Support and Utilization Activities	8.4
Policy Research	2.1

Note. Categories are mutually exclusive, except that the applied research category subsumes the three subcategories indented below it (thus only the figures shown for the five general categories should sum to 100%).

[a]Percentage of total OCD FY '75 early childhood research (190 projects).

Figure 4

Distribution of OCD FY '75 Early Childhood Research Projects, by Area of Research (N=190)

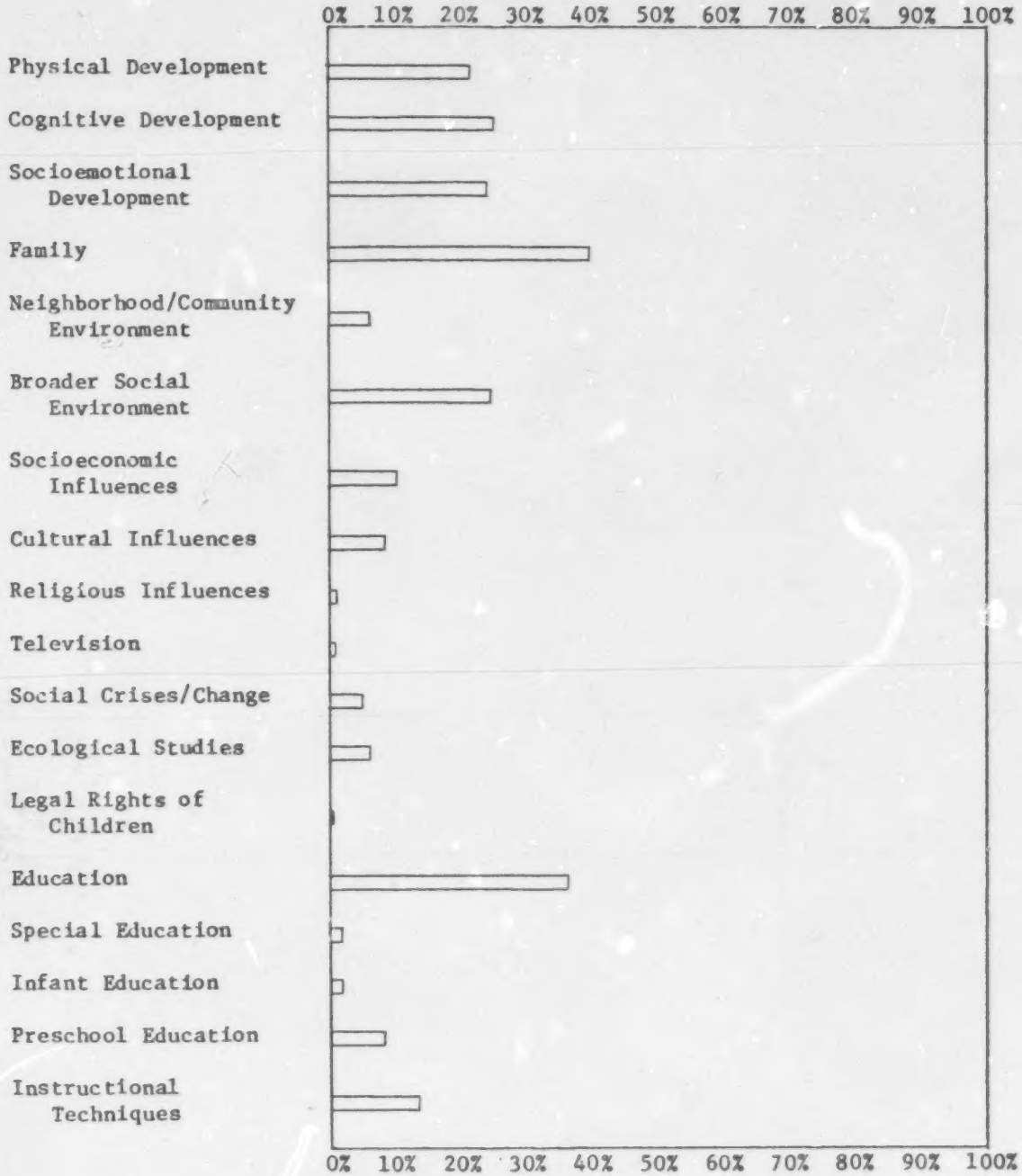
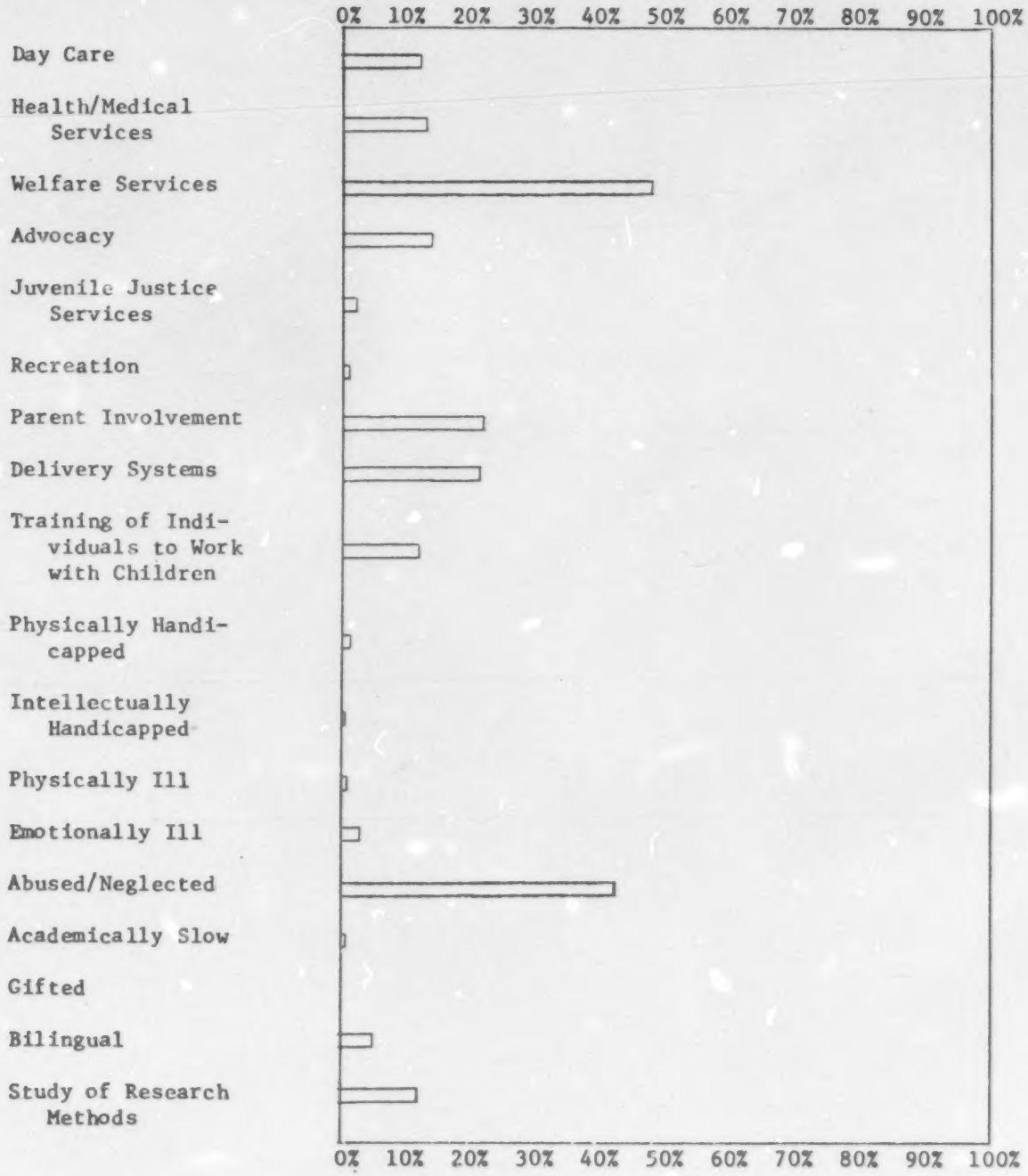


Figure 4 (Continued)

Distribution of OCD FY '75 Early Childhood Research Projects, by Area of Research (N=190)



Note. Categories are not mutually exclusive.

Table 21

Breakdown of OCD FY '75 Early Childhood Research Projects on Physical, Cognitive and Socioemotional Development

Category	%[a]
Total Research on Physical Development	21.1
Child Abuse or Neglect	14.7
Motor Development	2.1
Pregnancy and Childbirth	2.1
Sensory Development	1.1
Physical Handicaps	1.1
Physical Disease or Illness	1.1
Nutrition	1.1
Body Growth	.5
Total Research on Cognitive Development	24.2
Cognitive Achievement	13.7
Language	6.8
Perception	3.2
Learning	3.2
Concept Formation	1.6
Problem Solving	1.6
Attention	.5
Memory	.5
Reading	.5
Total Research on Socioemotional Development	24.2
Perception of Self	9.5
Emotional Development	9.5
Attitudes	5.8
Interpersonal Relationships	3.7
Personality	3.7
Social Behavior	3.7
Development of Values/Morals	1.1

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total OCD FY '75 early childhood research (190 projects).

Table 22

Breakdown of OCD FY '75 Early Childhood Research Projects on the Family

Category	%[a]
Total Research on Family	35.3
Parental Roles and Behavior	18.4
Parent-Child Relationships	15.3
Child Rearing	14.7
Family Structure	14.2
Training of Parents	11.1
Family/Society Interface	10.0
Family Health	8.4
Ecology of the Home	6.8
Sibling Relationships	1.6

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total OCD FY '75 early childhood research (190 projects).

Office of the Assistant Secretary for Planning and Evaluation
Office of the Secretary, DHEW

● Mission and/or Functions in Early Childhood Research:

The Office of the Assistant Secretary for Planning and Evaluation (ASPE) serves as staff to the Secretary, DHEW. ASPE is comprised of several divisions which have specific responsibilities for the areas of health, education, income maintenance, and social services/human development. Within ASPE, primary responsibilities for childhood research and evaluation include: (1) ensuring the policy relevance and substantive merit of agency research and evaluation plans and specific projects; (2) initiating some extramural research and evaluation activities on childhood-related policy issues which cut across individual agency concerns or fall outside the current purview of any single DHEW agency; and (3) supporting in-house analyses of research and evaluation findings and literature as they pertain to particular childhood-related policy issues.

ASPE's role in carrying out its responsibilities in agency-supported research and evaluation includes both facilitating and quality assurance in the development of agency plans and projects. Members of ASPE function as professional peers, offering technical assistance and informal recommendations to agencies and their staff and encouraging interagency coordination of research and evaluation activities. In its quality assurance role, ASPE conducts a formal review of the substantive aspects of agency research and evaluation plans and projects.

Some child-related research is supported throughout the various divisions of ASPE. The primary extramural research related to children currently supported by the Division of Social Services/Human Development in ASPE includes several policy studies, concept papers and synthesis papers on day care from infancy through adolescence. These papers and studies are part of an overall departmental "Evaluation of the Appropriateness of the Federal Interagency Day Care Requirements," a report due to Congress, Spring, 1977.

The Social and Rehabilitation Service, DHEW

- FY '75 Funding of Early Childhood Research: $1.2 million
- Number of Early Childhood Research Projects Active in FY '75: 11
- Mission and/or Functions in Early Childhood Research:

The Social and Rehabilitation Service provides income maintenance, rehabilitation, and other social services to people in need. Among its research and development goals are the following: to develop methods of improving the services of community facilities through services integration and other innovative methods, to develop methods of increasing SRS client independence, particularly by developing alternatives to institutional care, and to develop and demonstrate improved methods of research utilization. Research which contributes to child welfare is conducted in such areas as protective services for neglected and abused children, adoption, foster care, day care, and health care.

Description of FY '75 Early Childhood Research Activity

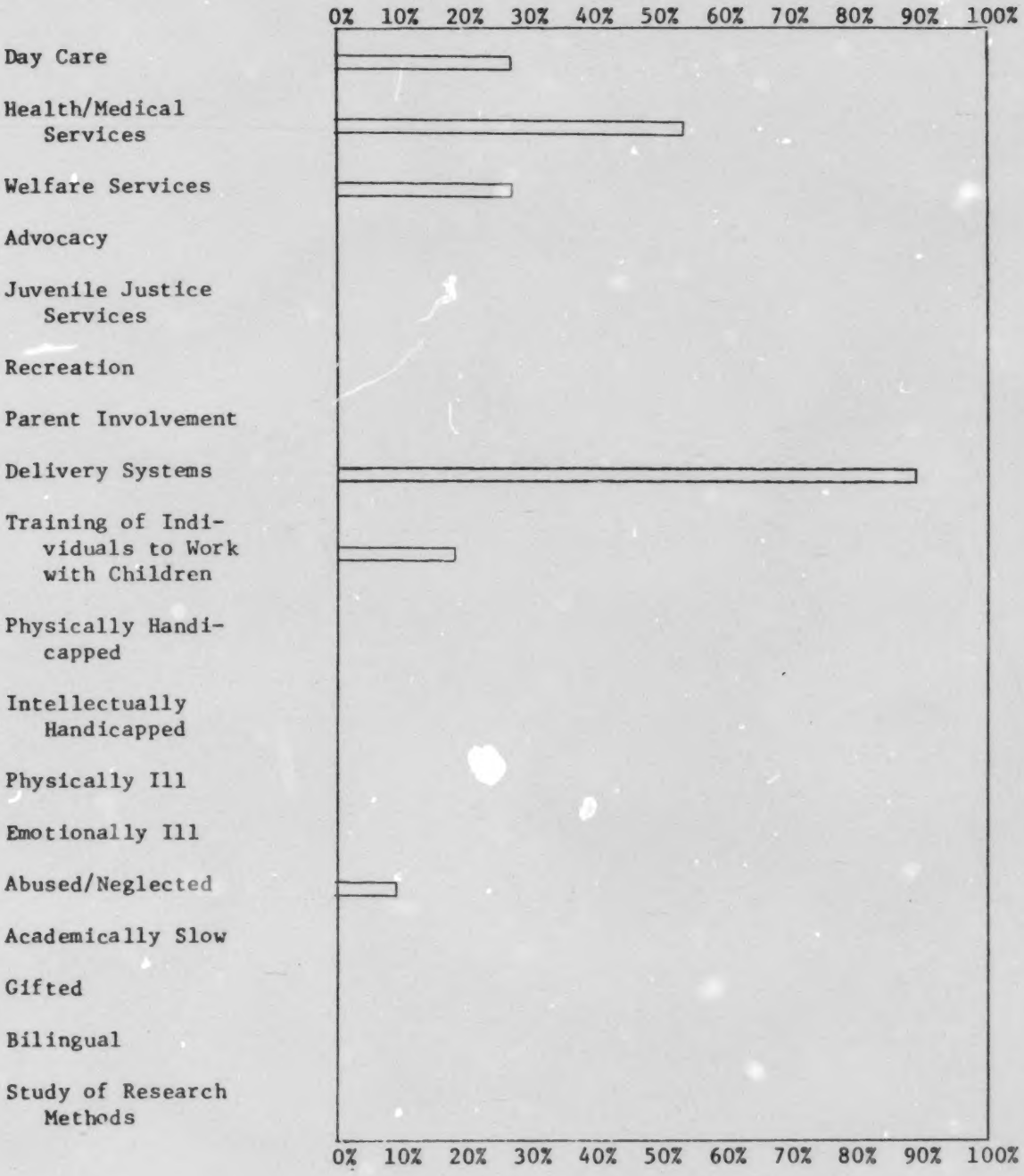
In FY '75 SRS supported a number of demonstration projects, the majority of which are part of the Early Periodic Screening, Diagnosis and Treatment (EPSDT) program and are categorized as health and medical services (55%).

Additional research for SRS includes: welfare services (30%); day care (29%); and the abused or neglected child (10%).

The research conducted by the Rehabilitation and Training Centers formerly supported by SRS is now funded by the newly organized Rehabilitation Service Administration.

Figure 5 (Continued)

Distribution of SRS FY '75 Early Childhood Research Projects, by Area of Research (N=11)



Note. Categories are not mutually exclusive.

Figure 5

Distribution of SRS FY '75 Early Childhood Research Projects, by Area of Research (N=11)

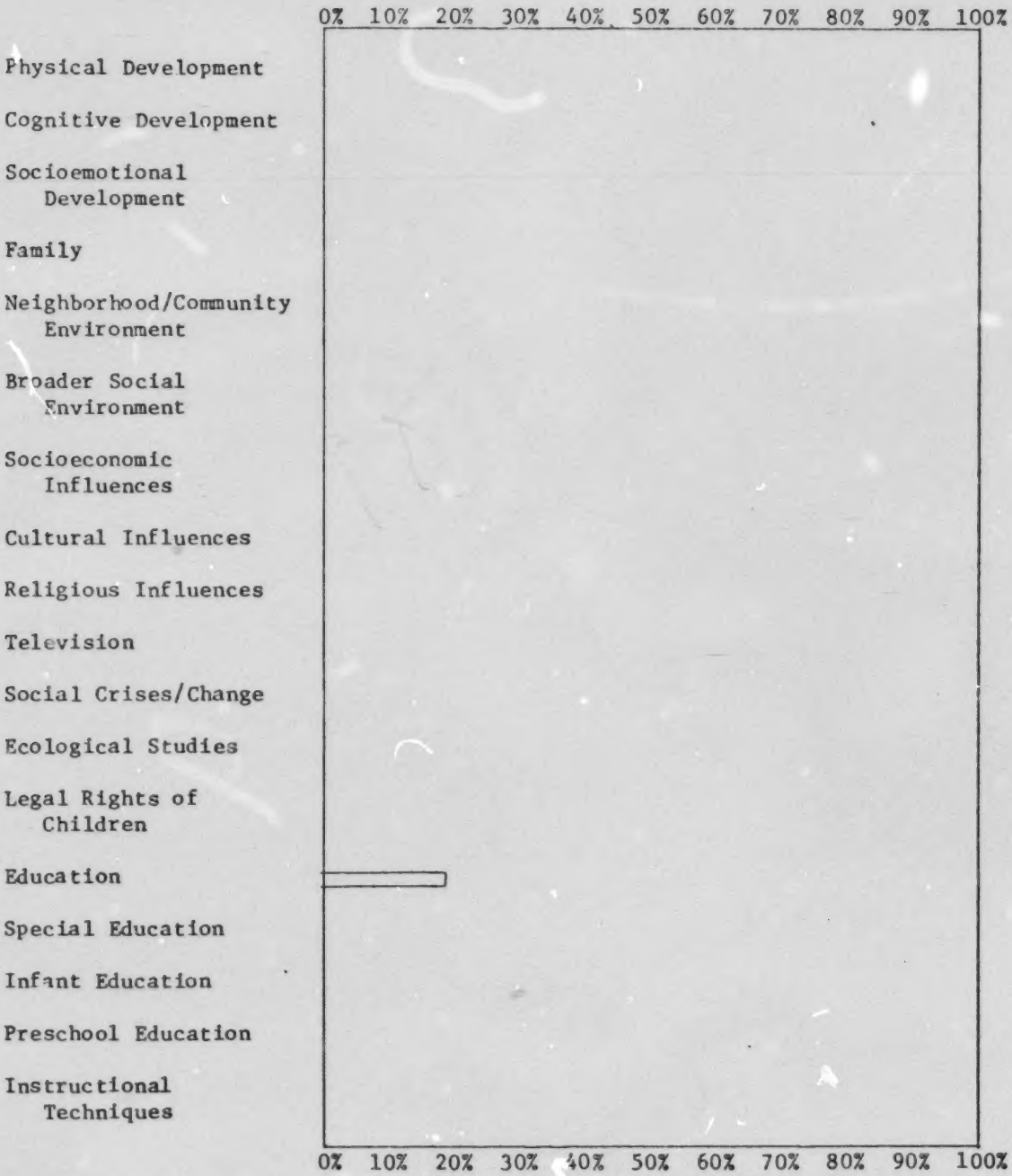


Table 23

Distribution of SRS FY '75
Early Childhood Projects, By Kind of Research

Kind of Research	%[a]
Basic	9.1
Applied	63.6
Pilot Study	0.0
Development	9.1
Demonstration and/or Replication	54.5
Evaluation	27.3
Research Support and Utilization Activities	0.0
Policy Research	0.0

Note. Categories are mutually exclusive, except that the applied research category subsumes the three subcategories indented below it (thus only the figures shown for the five general categories should sum to 100%).

[a]Percentage of total SRS FY '75 early childhood research (11 projects).

Rehabilitation Services Administration

- FY '75 Funding of Early Childhood Research: $.03 million
- Number of Early Childhood Research Projects Active in FY '75: 11
- Mission and/or Functions in Early Childhood Research:

The major research goals of the Rehabilitation Services Administration (RSA) are the development of new knowledge concerning the rehabilitation of handicapped individuals, the evaluation of existing knowledge in new settings, and the utilization of such knowledge in the delivery of vocational rehabilitation services.

Description of FY '75 Early Childhood Research Activity

The FY '75 RSA child-focused research represents a continuation of rehabilitation projects at university-based rehabilitation and training centers. Much of the basic research (72%) examines various aspects in the cognitive development (71%) of severely disabled children. The categories which receive the most attention are language development (45%) and the learning processes (18%).

Table 24

Distribution of RSA FY '75
Early Childhood Projects, By Kind of Research

Kind of Research	%[a]
Basic	72.7
Applied	27.3
Pilot Study	0.0
Development	0.0
Demonstration and/or Replication	9.0
Evaluation	0.0
Research Support and Utilization Activities	0.0
Policy Research	0.0

Note. Categories are mutually exclusive, except that the applied research category subsumes the three subcategories indented below it (thus only the figures shown for the five general categories should sum to 100%).

[a]Percentage of total RSA FY '75 early childhood research (11 projects).

Figure 6

Distribution of RSA FY '75 Early Childhood Research Projects, by Area of Research (N=11)

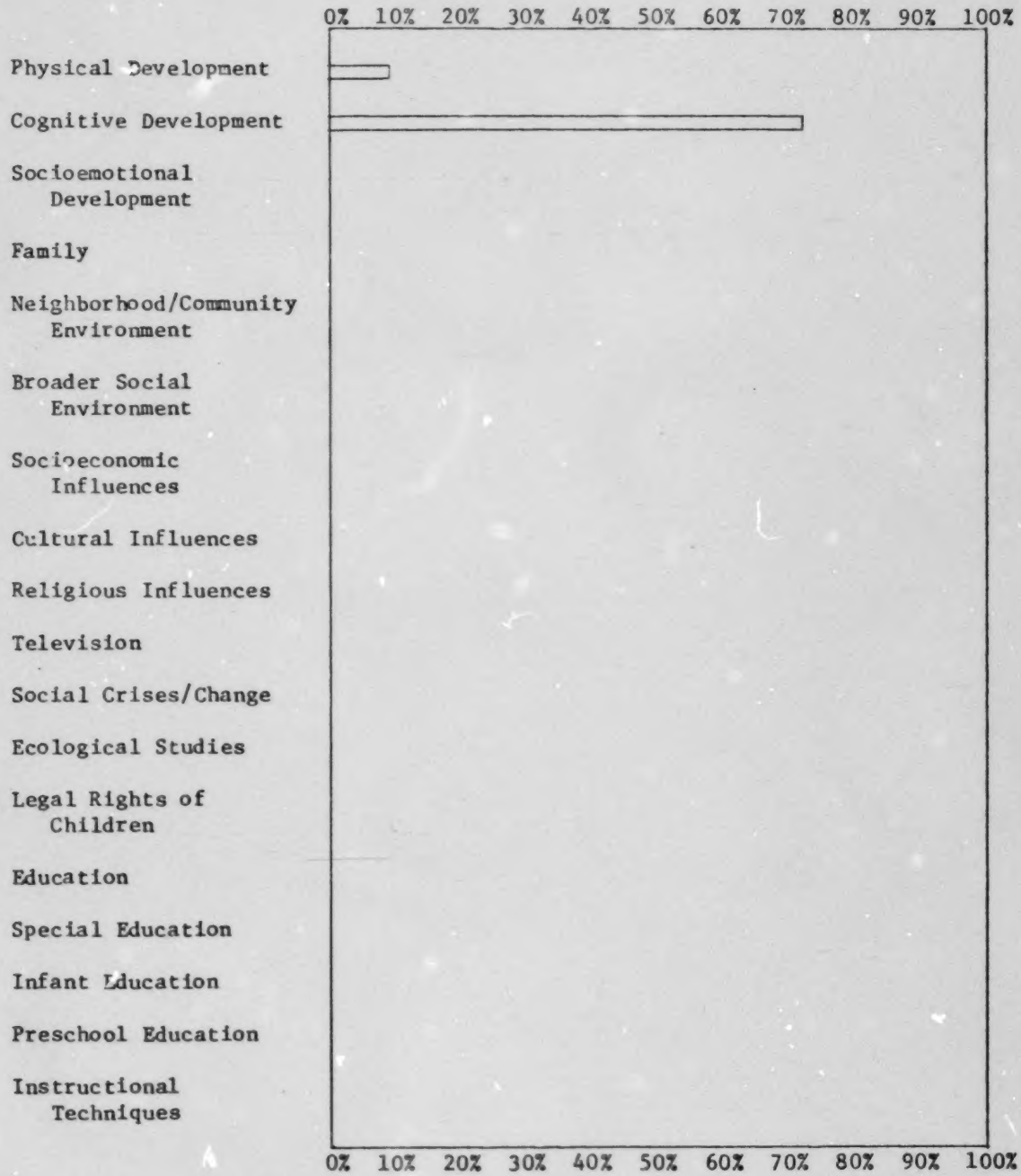
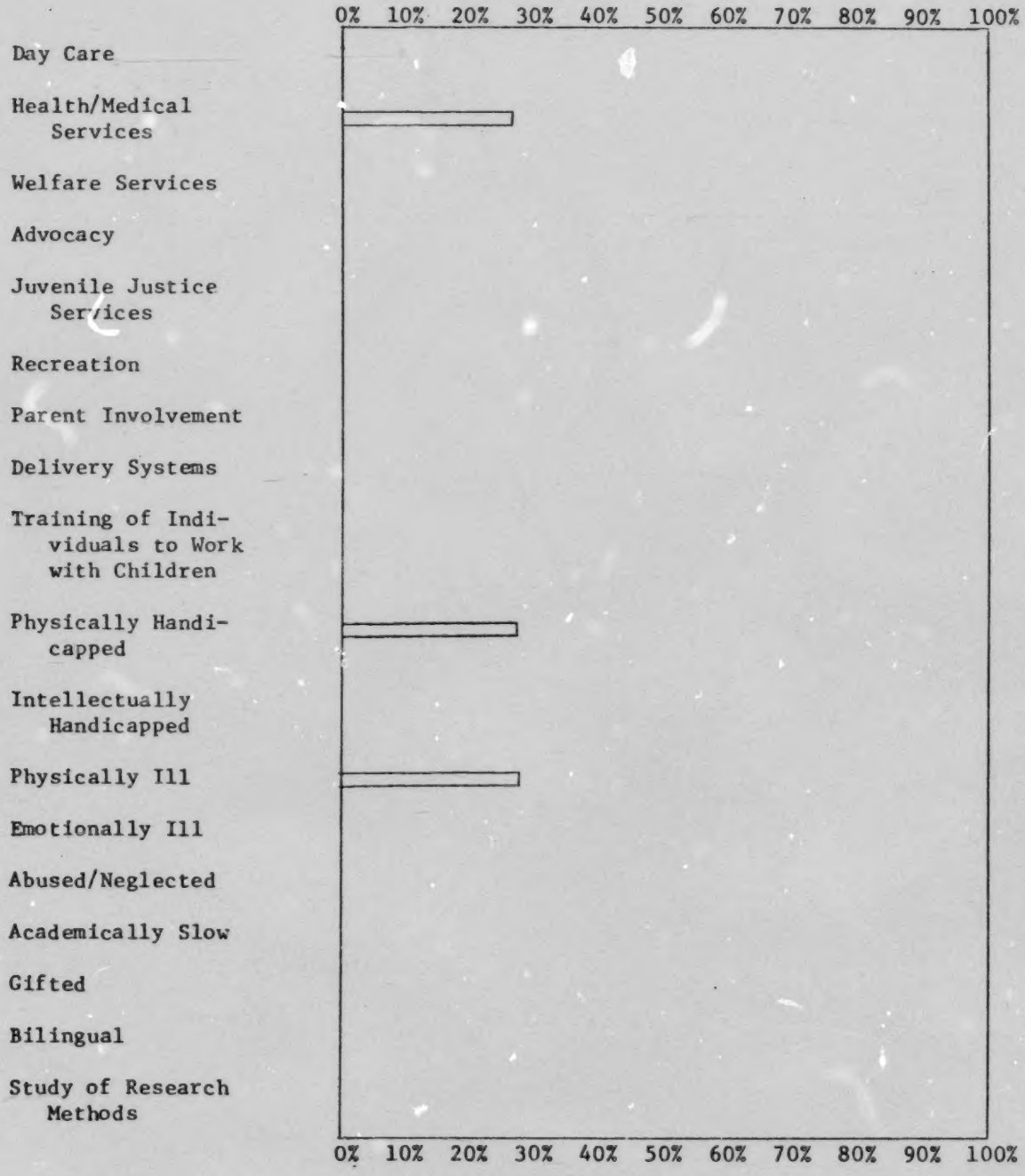


Figure 6 (Continued)

Distribution of RSA FY '75 Early Childhood Research Projects, by Area of Research (N=11)



Note. Categories are not mutually exclusive.

Table 25

Breakdown of RSA FY '75 Early Childhood
Research Projects on Cognitive Development

Category	%[a]
Total Research on Cognitive Development	72.7
Language	45.5
Learning	18.2
Memory	9.1

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total RSA FY '75 early childhood research (11 projects).

National Institute of Child Health and Human Development
National Institutes of Health, DHEW

- FY '75 Funding of Early Childhood Research: $22.3 million*
- Number of Early Childhood Research Projects Active in FY '75: 246**
- Mission and/or Functions in Early Childhood Research:

NICHD supports research in the basic processes of human development, including the biomedical processes, as well as those involved in social and behavioral development. Three main areas of investigation relate to early childhood: growth and development, mental retardation, and perinatal biology and infant mortality.

Description of FY '75 Early Childhood Research Activity

In FY '75 NICHD continued to fund research in a wide range of biological, behavioral and clinical sciences designed to study both the normal and the abnormal development of children and related child health issues. Emphasis is placed on all the developmental processes: physical (78%), cognitive (35%), and social (17%). The large physical development figure reflects NICHD's commitment to research on health issues. While there is relatively little activity relating to health services, there is considerable research on issues relating to physical disease (29%) and to pregnancy and childbirth (31%).

Research in child health is administered through three branches or programs: (1) Perinatal Biology and Infant Mortality; (2) Mental Retardation; and (3) Growth and Development. Among the primary concerns in Perinatal Biology and Infant Mortality research are the Sudden Infant Death Syndrome, low birthweight, maternal health and embryonic development.

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*Most of these NICHD projects relate only to children. Eight of the 246 projects, however, deal with both children and adolescents. While the full amount of funding for these projects ($2,669,006) is included in the figure shown for NICHD funding, it is estimated that only $1,776,342 actually applies to the child-related components of these projects.

**This project figure includes 11 intramural studies and four projects administered by NICHD but funded by other agencies.

Table 30 shows that most research on handicapped children concerns the mentally retarded (13%). In Mental Retardation high priority is placed on studies of the epidemiology and etiology of mental retardation, cytogenetics, in-born errors of metabolism, and prevention, early diagnosis and treatment. The Growth and Development studies include work in the areas of physical growth and maturation, nutrition, behavioral, cognitive and social development, prevention of accidental injury, developmental immunology and developmental pharmacology.

The research program as a whole is characterized by the large amount of basic research (74%), much of which is long-term and longitudinal.

Studies which focus on the family primarily examine parent-child relationships, childrearing practices and family health.

Table 26

Distribution of NICHD FY '75
Early Childhood Projects, By Kind of Research

Kind of Research	%[a]
Basic	74.6
Applied	20.2
Pilot Study	0.0
Development	8.5
Demonstration and/or Replication	2.8
Evaluation	3.2
Research Support and Utilization Activities	2.0
Policy Research	0.0

Note. Categories are mutually exclusive, except that the applied research category subsumes the three subcategories indented below it (thus only the figures shown for the five general categories should sum to 100%).

[a]Percentage of total NICHD FY '75 early childhood research (246 projects).

Figure 7

Distribution of NICHD FY '75 Early Childhood Research Projects, by Area of Research (N=246)

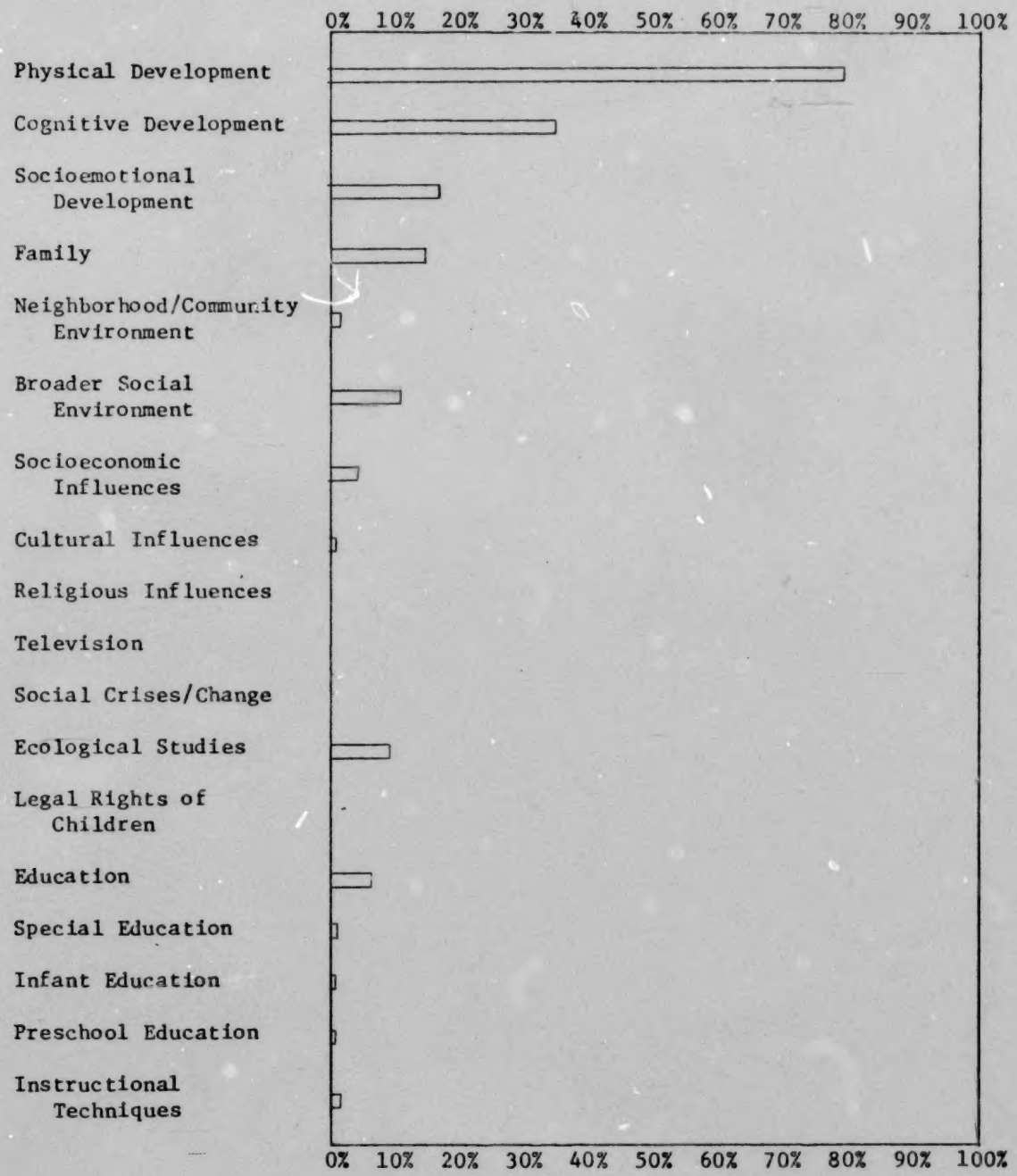
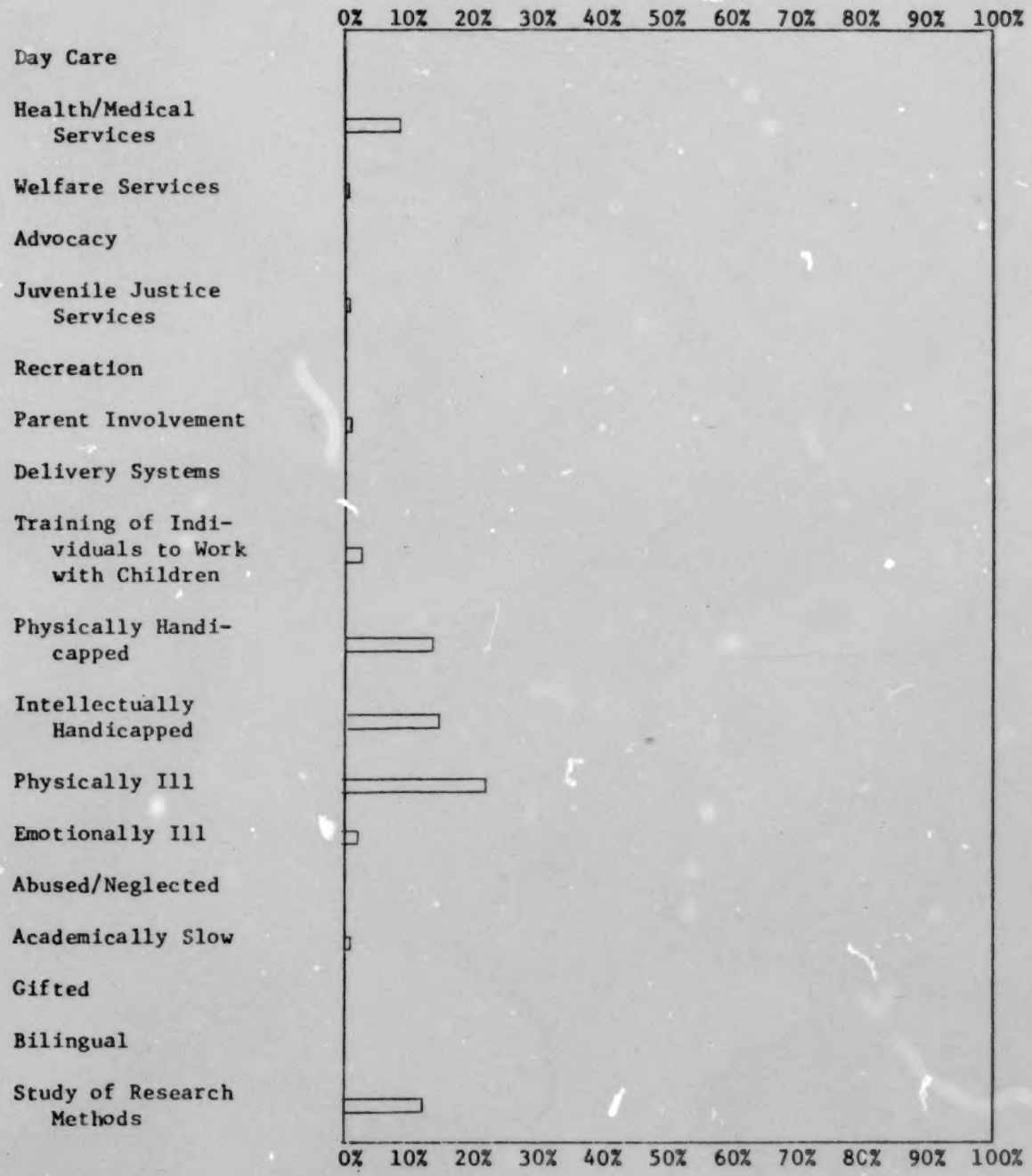


Figure 7 (Continued)

Distribution of NICHD FY '75 Early Childhood Research Projects, by Area of Research (N=246)



Note. Categories are not mutually exclusive.

Table 27

Breakdown of NICHD FY '75 Early Childhood Research Projects on Physical, Cognitive and Socioemotional Development

Category	χ^a
Total Research on Physical Development	78.2
Physical Disease or Illness	39.1
Pregnancy and Childbirth	31.5
Body Growth	24.2
Genetics	15.7
Physical Handicaps	15.3
Nutrition	11.7
Sensory Development	7.7
Physical Characteristics	7.7
Motor Development	6.9
Epidemiology	4.0
Pharmacology	2.4
Injury/Accident/Trauma	1.2
Drug Abuse	.4
Poisoning or Intoxication	.4
Total Research on Cognitive Development	35.5
Perception	17.0
Achievement	14.5
Language	12.5
Attention	8.1
Learning	7.7
Memory	7.3
Intellectual Handicaps	5.7
Problem-Solving	4.4
Concept Formation	3.6
Reading	1.6
Creativity	.4

Table 28

Breakdown of NICHD FY '75 Early Childhood Research Projects on Physical, Cognitive and Socioemotional Development (Continued)

Category	%[a]
Total Research on Socioemotional Development	17.3
Emotional Development	6.9
Interpersonal Relationships	5.2
Social Behavior	4.8
Motivation	4.4
Personality	4.4
Attitudes	2.4
Perception-of-Self	2.4
Development of Values	.8

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total NICHD FY '75 early childhood research (246 projects).

Table 29

Breakdown of NICHD FY '75 Early Childhood Research Projects on the Family

Category	%[a]
Total Research on Family	14.9
Parent-Child Relationships	7.6
Child Rearing	4.8
Family Health	4.0
Ecology of the Home	2.4
Parental Roles and Behavior	2.4
Parent Training	1.6
Sibling Relationships	1.6
Family Structure	.4

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total NICHD FY '75 early childhood research (246 projects).

Table 30

Breakdown of NICHD FY '75 Early Childhood
Research Projects Relating to Handicapped Children

Category	%[a]
Total Research on Handicapped Children	24.6
Mentally Retarded	13.7
Neurologically Handicapped	8.1
Communicative Disorders	2.0
Aurally Handicapped	1.6
Learning Disabled	1.2
Visually Handicapped	.4
Orthopedically Handicapped	.4

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total NICHD FY '75 early childhood research (246 projects).

National Institute of Neurological and Communicative Disorders and Stroke
National Institutes of Health, DHEW

- FY '75 Funding of Early Childhood Research: $7.3 million
- Number of Early Childhood Research Projects Active in FY '75: 103
- Mission and/or Functions in Early Childhood Research:

The National Institute of Neurological and Communicative Disorders and Stroke (NINCDS) acknowledges a special mission to futher both basic and applied research in the neurological and communicative disorders relating to early childhood. Because neurological integrity is so important to quality of life and capability for independent functioning, and because disorders in the young child can produce life-long disability and loss of independence, the impact of childhood neurological and communicative disorders is enormous both in individual and societal terms.

NINCDS has identified the following high priority research issues relevant to early childhood:

1. Neurological developmental abnormalities
   a. Cerebral palsy
   b. Mental retardation
   c. Epilepsy and other paroxysmal disorders. Experimental and clinical studies, including specific efforts with respect to absence seizures, infantile spasms, and febrile seizures and their sequelae and treatment.
   d. Autism, neurologic aspects
   e. Learning disorders. Plasticity studies, including material relevant to critical periods and deprivation syndromes, and neurological aspects of "minimal cerebral dysfunction" and learning disability.
2. Communicative disorders
   a. Auditory disorders in children, including procedures for early identification of congenital deafness, detection and treatment of disorders such as serous otitis media, and prevention of permanent hearing impairment as a result of disease or noise exposure.
   b. Aids for the communicatively handicapped. Development of improved sensory aids, etc., accompanied by assessment of costs and benefits of prototype aids.
   c. Impaired speech and/or language development. Improved detection, assessment and treatment of speech and language impairment in preschool children, including those who may also be minimally brain damaged, mentally retarded, autistic, hearing impaired, etc., but emphasizing particularly children who are primarily impaired in language development without other difficulties.
3. Congenital malformations and metabolic, degenerative, and nutritional disorders of brain, nerve, and muscle as they affect children,

e.g., sphingolipidoes, muscular dystrophies, mucopolysaccharid disorders. Basic and clinical studies involving biochemistry, enzymology, morphology, genetic mechanism, and therapy.

4. Traumatic, vascular and asphyxial disorders producing neurological disability in children.

5. Viral and other infections of the developing nervous system, including slow viruses.

6. Cerebral neoplasms in children, incidence and prevalence studies.

7. The Collaborative Perinatal Project. This prospective, long-term investigation of approximately 58,000 women during their pregnancies, and the subsequent development (through age 7 or 8) of the children born of these pregnancies, has completed its data collection phase. On-going data analysis and interpretation will provide extensive information concerning many of the areas listed above. Study data are being analyzed in ten primary topics: cerebral palsy, mental retardation, communicative disorders, visual abnormality, convulsive disorders, learning disorders, minimal brain dysfunction, congenital malformations, birth-weight-gestational age relationships, and neuropathology, general pathology and placentology.

Description of FY '75 Early Childhood Research Activity

NINCDS FY '75 research reflects this agency's heavy emphasis on physical health: physical development (90%), physically handicapped (52%) and health and medical services (27%).

Basic research accounts for 56 percent of the projects while 40 percent of the research is applied, which includes work on the development of treatment devices and techniques for the handicapped (7%).

The breakdown of physical development shows that 52 percent of all of the agency's early childhood projects focus on physical disease, and 33 percent relate to the sensory processes. A substantial number of projects on pregnancy and childbirth is also evident (22%).

In FY '75 NINCDS continued analysis of data collected from the Collaborative Perinatal Project.

In the breakdown of research on cognitive development, the emphasis on the prevention, diagnosis, and treatment of neurological and communicative disorders can be seen in the high proportion of activity in the areas of perception (20%) and language development (22%).

Figure 8

Distribution of NINCDS FY '75 Early Childhood Research Projects, by Area of Research (N=103)

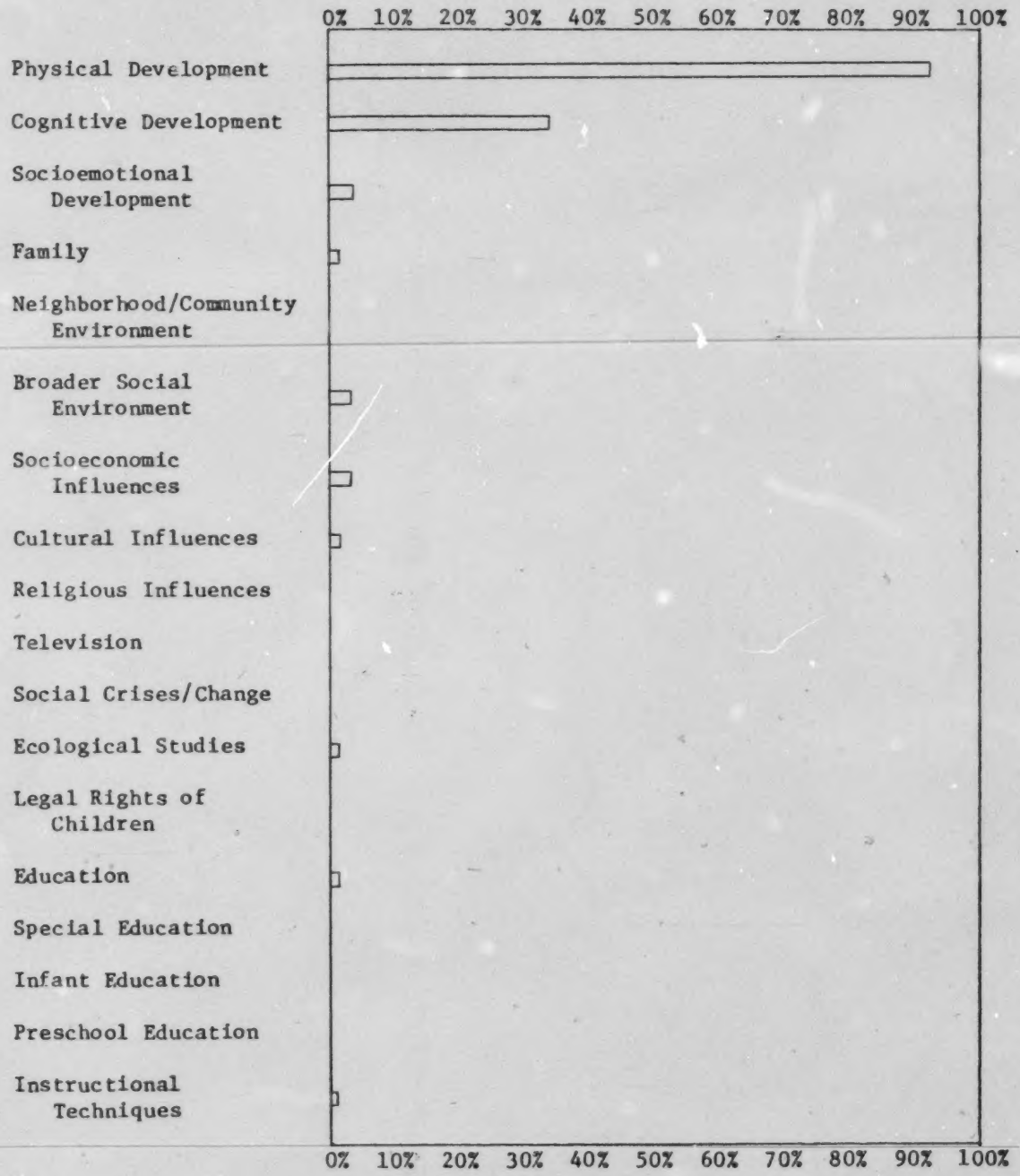
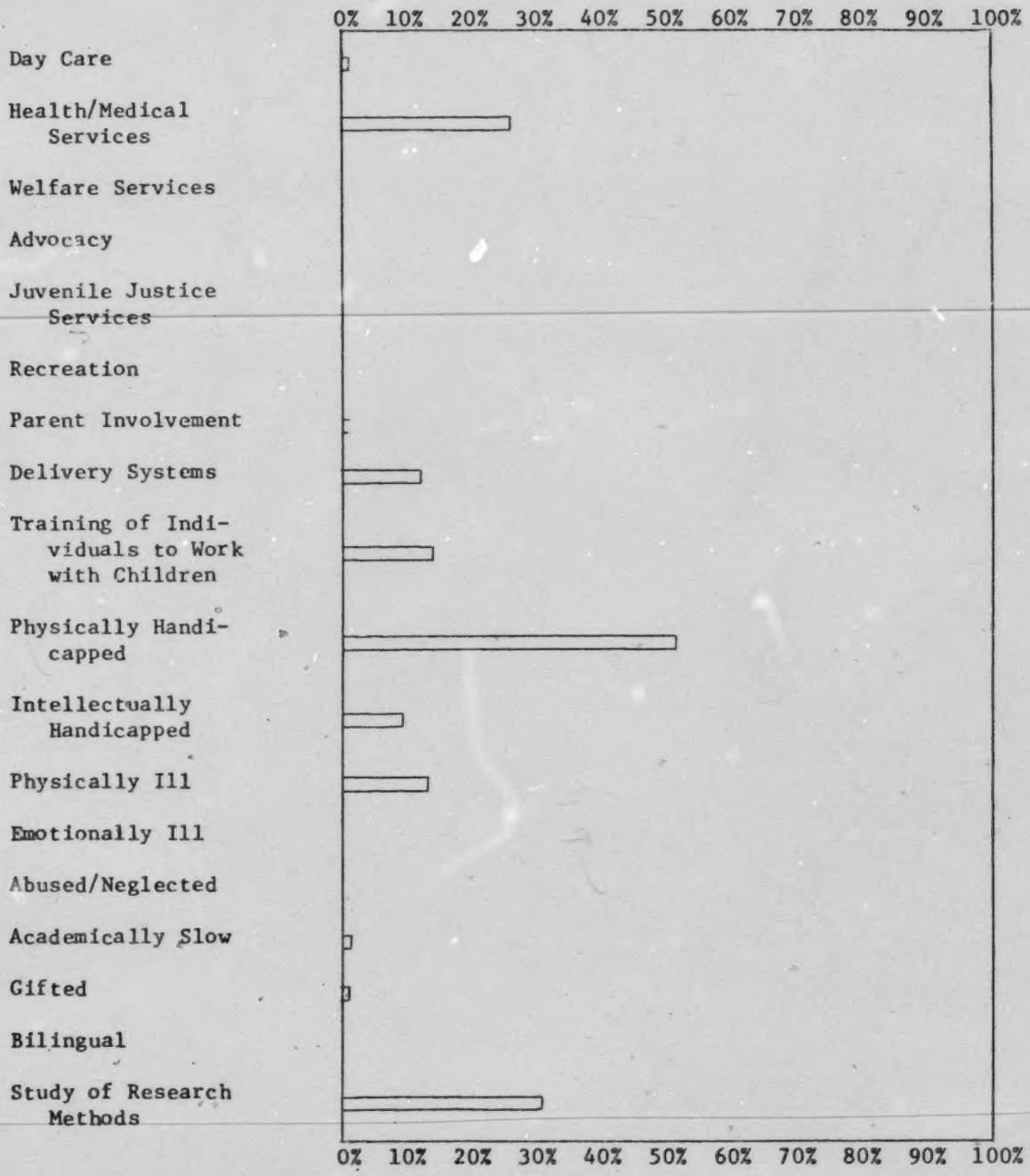


Figure 8 (Continued)

Distribution of NINCDS FY '75 Early Childhood Research Projects, by Area of Research (N=103)



Note. Categories are not mutually exclusive.

Table 31

Distribution of NINCDS FY '75
Early Childhood Projects, By Kind of Research

Kind of Research	%[a]
Basic	56.3
Applied	39.8
Pilot Study	0.0
Development	6.8
Demonstration and/or Replication	7.8
Evaluation	2.9
Research Support and Utilization Activities	1.0
Policy Research	0.0

Note. Categories are mutually exclusive, except that the applied research category subsumes the three subcategories indented below it (thus only the figures shown for the five general categories should sum to 100%).

[a]Percentages of total NINCDS FY '75 early childhood research (103 projects).

Table 32

Breakdown of NINCDS FY '75 Early Childhood
Research Projects Relating to Handicapped Children

Category	%[a]
Total Research on Handicapped Children	59.2
Neurologically Handicapped	35.9
Aurally Handicapped	14.6
Mentally Retarded	6.8
Learning Disabled	2.9
Communicative Disorders	1.0
Visually Handicapped	1.0

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total NINCDS FY '75 early childhood research (103 projects).

Table 33

Breakdown of NINCDS FY '75 Early Childhood Research Projects on Physical and Cognitive Development

Category	%[a]
Total Research on Physical Development	90.3
Physical Disease or Illness	52.4
Sensory Development	33.0
Pregnancy and Childbirth	22.3
Physical Characteristics	15.5
Body Growth	13.6
Motor Development	11.7
Physical Handicaps	10.7
Injury/Accident/Trauma	4.9
Genetics	3.9
Pharmacology	2.9
Epidemiology	1.9
Nutrition	1.9
Total Research on Cognitive Development	35.0
Language	22.3
Perception	20.4
Intellectual Handicaps	5.8
Memory	5.8
Cognitive Achievement	3.9
Problem-Solving	2.9
Attention	1.9
Reading	1.9
Concept Formation	1.0

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total NINCDS FY '75 early childhood research (103 projects).

National Institute of Mental Health
Alcohol, Drug Abuse, and Mental Health Administration, DHEW

- FY '75 Funding of Early Childhood Research: $15.4 million
- Number of Early Childhood Research Projects Active in FY '75: 400
- Mission and/or Functions in Early Childhood Research:

The objectives of the research program of NIMH are to provide support of research on the etiology, diagnosis, treatment, prevention and control of mental illness, and the promotion of mental health. NIMH is primarily responsible, therefore, for the support of applied, clinical and basic research aimed either at the resolution of specific problems of mental and emotional illness, or at the augmenting of knowledge regarding the parameters of human behavior--including its prediction and control. Areas of investigation are varied, spanning a continuum from the investigation of basic cognitive, personality and socialization processes, through the development of research methodologies, to study of intervention programs and other environmental influences which may affect the healthy emotional and cognitive growth of all children.

Description of FY '75 Early Childhood Research Activity

As can be seen in Figure 9, NIMH early childhood research is evenly distributed over a wide array of areas, in contrast to many other agencies which show high percentages of activity in only a few areas. At the same time, a strong emphasis on the developmental processes is evident. A major thrust of the FY '75 NIMH research is in the area of socioemotional development (54%) with special emphasis placed on the environmental factors which affect the emotional development of the child. Emotional development (30%), patterns of social behavior (29%), interpersonal relationships (14%), and personality characteristics (12%) account for many of the projects in this area. Studies of cognitive achievement (25%), language development (14%), and learning processes (14%) represent the major areas of interest in studies of cognitive development.

The development of the child in the context of the family is another heavily supported area in NIMH research. Parent-child relationships (15%), family health (11%), and family structure (10%) receive considerable attention in this regard. In FY '75 NIMH expanded its investigation of the abused or neglected child.

NIMH's interest in examining the child in his own environment is reflected in the support of research on the broader social environment (36%), ecological studies (15%), and cultural influences (9%).

While the majority of the research is categorized as basic (58%), 32% is is applied, including studies on health and medical services and educational services designed to aid in the development of the child.

Table 34

Distribution of NIMH FY '75
Early Childhood Projects, by Kind of Research

Kind of Research	%[a]
Basic	58.0
Applied	32.2
Pilot Study	1.5
Development	9.3
Demonstration and/or Replication	15.6
Evaluation	6.0
Research Support and Utilization Activities	2.3
Policy Research	1.5

Note. Categories are mutually exclusive, except that the applied research category subsumes the three subcategories indented below it (thus only the figures shown for the five general categories should sum to 100%).

[a]Percentage of NIMH FY '75 early childhood research (400 projects).

Figure 9

Distribution of NIMH FY '75 Early Childhood Research Projects, by Area of Research (N=400)

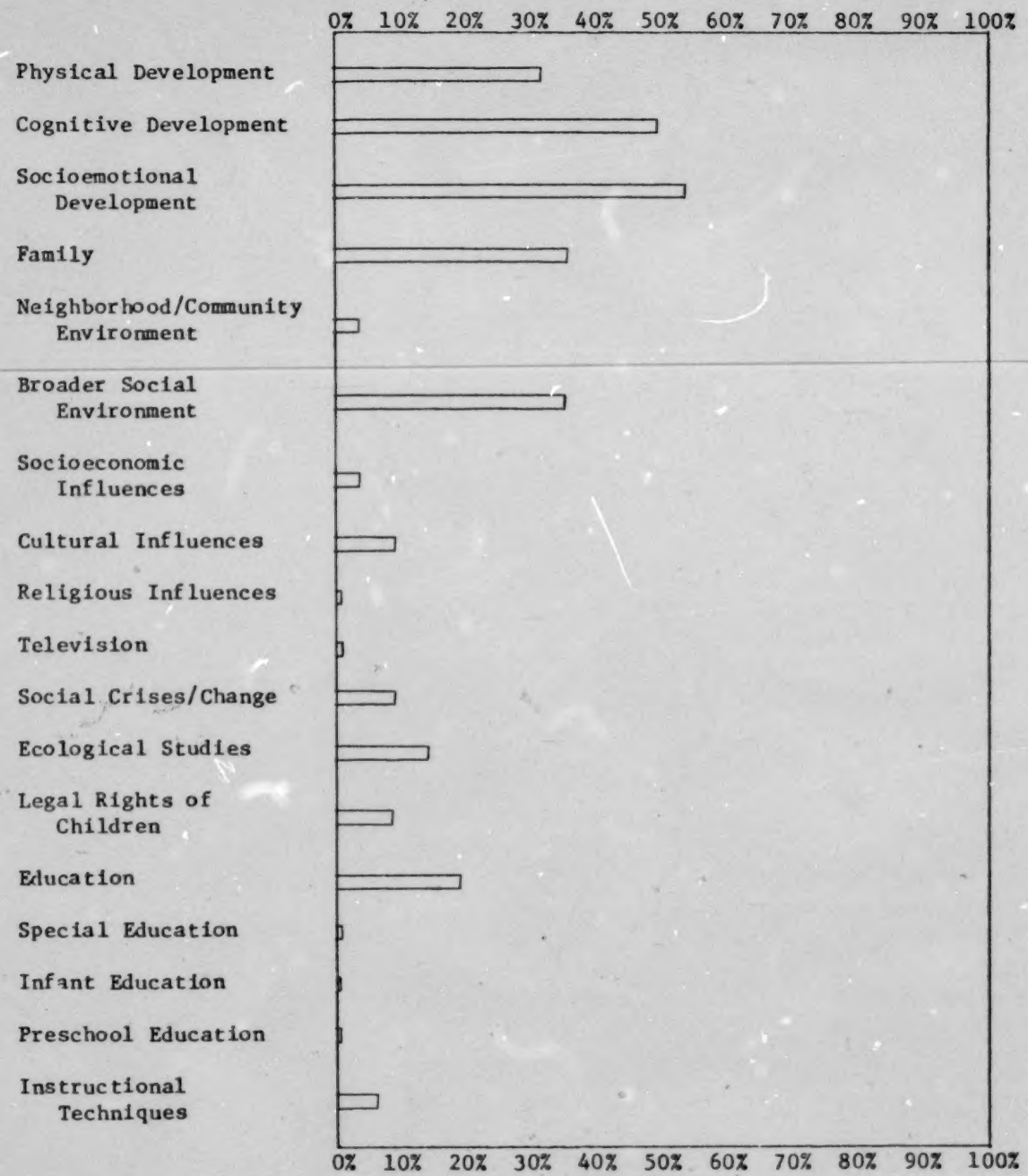
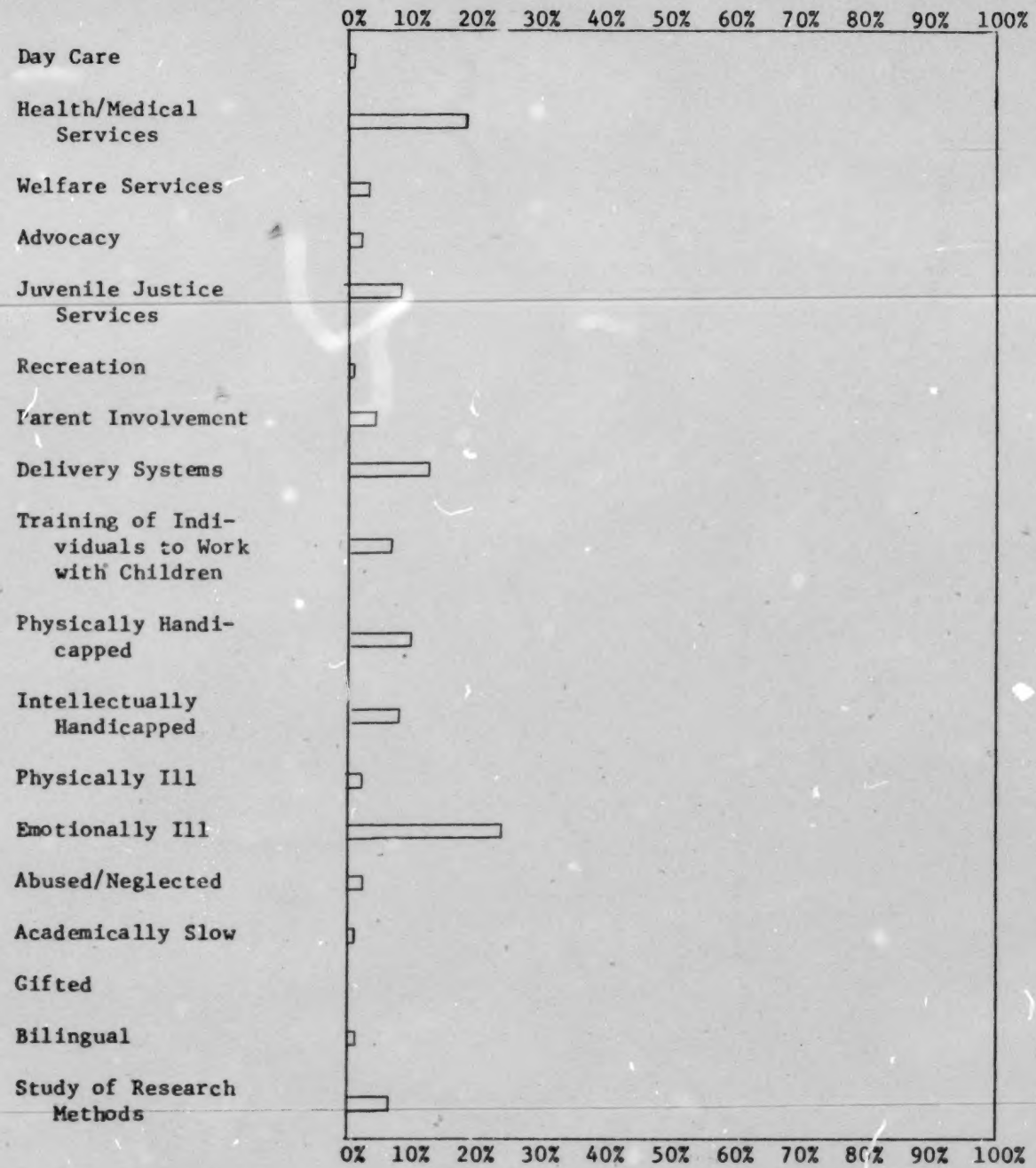


Figure 9 (Continued)

Distribution of NIMH FY '75 Early Childhood Research Projects, by Area of Research (N=400)



Note. Categories are not mutually exclusive.

Table 35

Breakdown of NIMH FY '75 Early Childhood Research Projects on Physical, Cognitive and Socioemotional Development

Category	%[a]
Total Research on Physical Development	32.3
Motor Development	7.3
Physical Handicaps	7.0
Pharmacology	6.8
Physical Disease or Illiness	5.8
Genetics	5.0
Sensory Development	4.8
Body Growth	3.8
Pregnancy and Childbirth	3.5
Physical Characteristics	2.3
Drug Abuse	1.5
Injury/Accident	1.3
Epidemiology	1.3
Nutrition	.8
Alcohol Abuse	.8
Child Abuse/Neglect	1.3
Total Research on Cognitive Development	49.3
Cognitive Achievement	25.3
Learning	13.8
Language	13.5
Perception	11.8
Intellectual Handicaps	10.3
Memory	8.5
Attention	7.8
Problem Solving	7.0
Concept Formation	5.5
Reading	3.0
Computer Simulation of Thought	.8
Creativity	.5

Table 36

Breakdown of NIMH FY '75 Early Childhood Research Projects on Physical, Cognitive and Socioemotional Development (Continued)

Category	%[a]
Total Research on Socioemotional Development	54.5
Emotional Development	29.8
Social Behavior	28.3
Interpersonal Relationships	13.8
Personality	11.3
Attitudes	9.3
Perception	9.3
Motivation	7.8
Development of Values/Morals	5.3

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total NIMH FY '75 early childhood research (400 projects).

Table 37
Breakdown of NIMH FY '75 Early Childhood Research Projects on the Family

Category	%[a]
Total Research on Family	36.5
Parent-Child Relationships	14.5
Family Health	10.8
Family Structure	9.8
Child Rearing	8.8
Parental Roles and Behavior	7.0
Ecology of the Home	7.0
Family/Society Interface	4.5
Training of Parents	4.5
Sibling Relationships	.8

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total NIMH FY '75 early childhood research (400 projects).

Table 38

Breakdown of NIMH FY '75 Early Childhood
Research Projects Relating to Handicapped Children

Category	%[a]
Total Research on Handicapped Children	14.8
Neurologically Handicapped	6.5
Mentally Retarded	4.8
Learning Disabled	3.0
Aurally Handicapped	1.5
Visually Handicapped	.8
Orthopedically Handicapped	.8
Handicapped by Communicative Disorder	.8

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total NIMH FY '75 early childhood research (400 Projects).

National Institute of Drug Abuse
Alcohol, Drug Abuse and Mental Health Administration, DHEW

- FY '75 Funding of Early Childhood Research: $3.0 million
- Number of Early Childhood Research Projects Active in FY '75: 28
- Mission and/or Functions in Early Childhood Research:

The mission of the National Institute of Drug Abuse is to support research and demonstration projects investigating the nature and extent of drug use problems, comparing various treatment methods, and improving the efficiency of treatment for the young drug user. In addition, prevention and education research is supported through the expansion of model treatment and intervention ideas.

Description of FY '75 Early Childhood Research Activity

The NIDA FY '75 child-focused research primarily consists of development (21%) and demonstration (21%) projects designed to prevent drug abuse. These drug abuse education curricula (61%) are offered both as part of the curriculum in elementary school and as components of drug abuse centers across the nation. Some are designed for specific target populations such as Chicanos or Harlem youth. Attitudes (42%) toward drug use among children are examined in many projects, as is the issue of maternal narcotic addiction and its effect on the fetus or neonate (14%).

Table 39

Distribution of NIDA FY '75
Early Childhood Projects, by Kind of Research

Kind of Research	%[a]
Basic	25.0
Applied	71.4
Pilot Study	7.1
Development	21.4
Demonstration and/or Replication	21.4
Evaluation	3.6
Research Support and Utilization Activities	0.0
Policy Research	0.0

Note. Categories are mutually exclusive except that the applied research category subsumes the three subcategories indented below it (thus only the figures shown for the five general categories should sum to 100%).

[a]Percentage of total NIDA FY '75 early childhood research (28 projects).

Figure 10

Distribution of NIDA FY '75 Early Childhood Research Projects, by Area of Research (N=28)

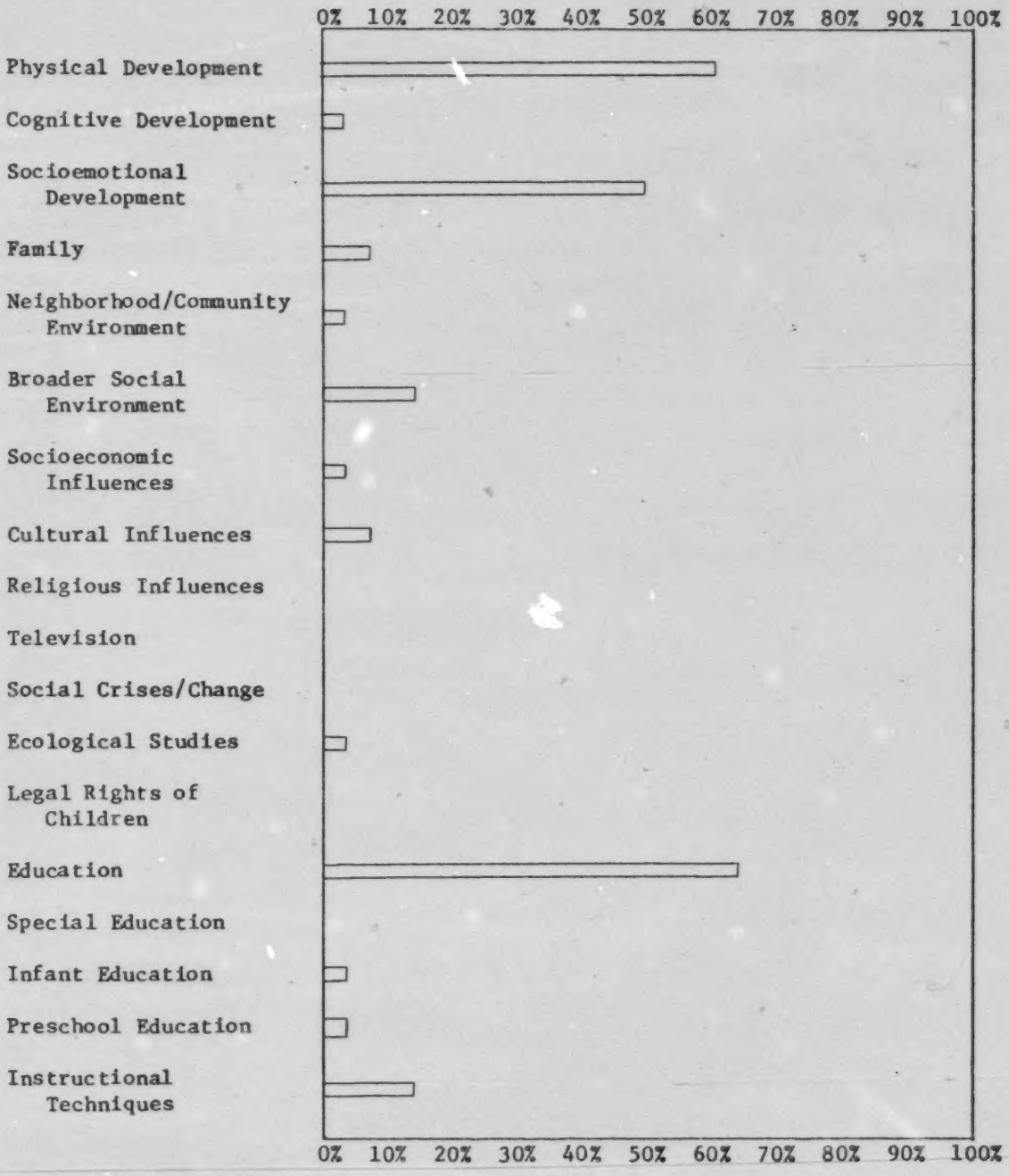
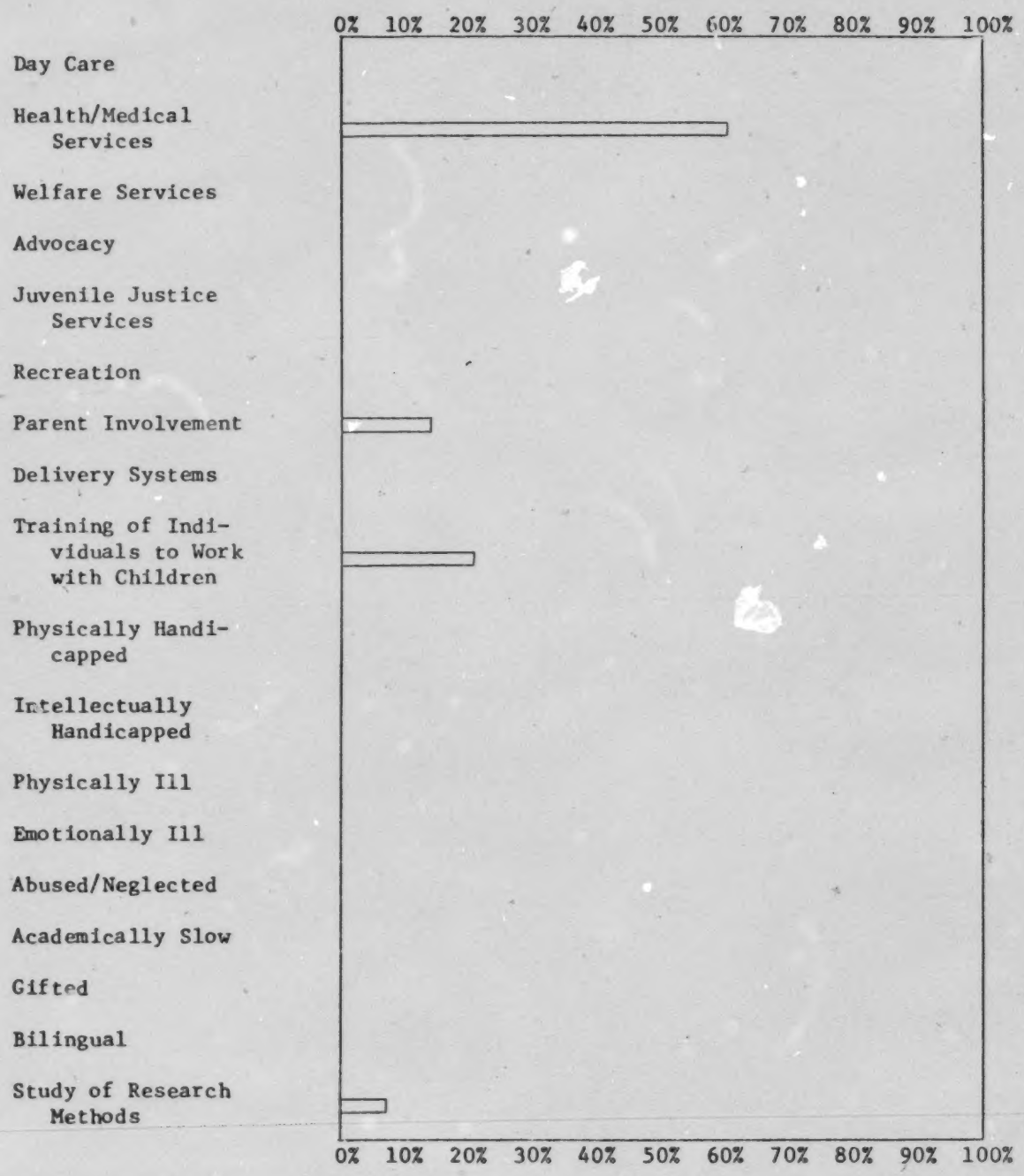


Figure 10 (Continued)

Distribution of NIDA FY '75 Early Childhood Research Projects, by Area of Research (N=28)



Note. Categories are not mutually exclusive.

Table 40

Breakdown of NIDA FY '75 Early Childhood Research Projects on Physical and Socioemotional Development

Category	%[a]
Total Research on Physical Development	60.7
Drug Abuse	60.7
Pregnancy and Childbirth	14.3
Pharmacology	7.1
Epidemiology	3.6
Total Research on Socioemotional Development	50.0
Attitudes/Behavior	42.9
Perception of Self	3.6
Personality Characteristics	3.6
Emotional Development	3.6

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total NIDA FY '75 early childhood research (28 projects).

Table 41

Breakdown of NIDA FY '75 Early Childhood Research Projects on Educational Curriculum

Category	%[a]
Total Research on Educational Curriculum	64.3
Drug Abuse Education	60.7
Fine Arts Education	7.1
Cultural Awareness Education	7.1
Physical Education	3.6
Environmental Studies	3.6

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total NIDA FY '75 early childhood research (28 projects).

National Institute on Alcohol Abuse and Alcoholism
Alcohol, Drug Abuse, and Mental Health Administration, DHEW

- FY '75 Funding of Early Childhood Research: $1.2 million
- Number of Early Childhood Research Projects Active in FY '75: 17
- Mission and/or Functions in Early Childhood Research:

The National Institute on Alcohol Abuse and Alcoholism (NIAAA) has two principal objectives: (1) to make treatment and rehabilitative services available to alcoholic people and problem drinkers by mobilizing existing resources at the Federal, state and local level and by developing a broad range of community alcoholism treatment and rehabilitative programs; (2) to pursue new methods for preventing the abuse and misuse of alcoholic beverages and the testing and evaluating of the effectiveness of these methods.

Within the Division of Prevention, research includes investigations of the impact of a wide variety of factors--social, psychological, physical, economic, legal and educational--upon people's drinking patterns. In addition, studies on the etiologies of alcoholism hope to clarify the different roles that culture, health, and quality of life play in the development of this illness. Youth have been identified as the primary target group in many of these studies. One important program direction within this division is through the Youth Education Branch. This section supports demonstration projects designed to encourage responsibility in the use of alcohol and develops and tests new youth programs for alcohol education. A second interest, channeled through the Community Prevention Branch, has as its goal the development of effective health education programs relating to alcohol abuse for the whole community population, which also include youth.

Description of FY '75 Early Childhood Research Activity

NIAAA supports a number of alcohol prevention programs designed to educate the young child as to the problems of alcohol use and abuse (65%). It offers health and medical services for treatment of the very young alcoholic, as well as families and children of alcoholic adults.

In addition to its work on services, NIAAA conducts substantial research on alcohol use and abuse per se, as can be seen in the large percentages for basic research (29%) and for research on alcohol abuse under the category of physical development. Included here are studies on the effect of maternal use of alcohol on pregnancy and neonates (18%) and family health (12%).

Figure 11

Distribution of NIAAA FY '75 Early Childhood Research Projects, by Area of Research (N=17)

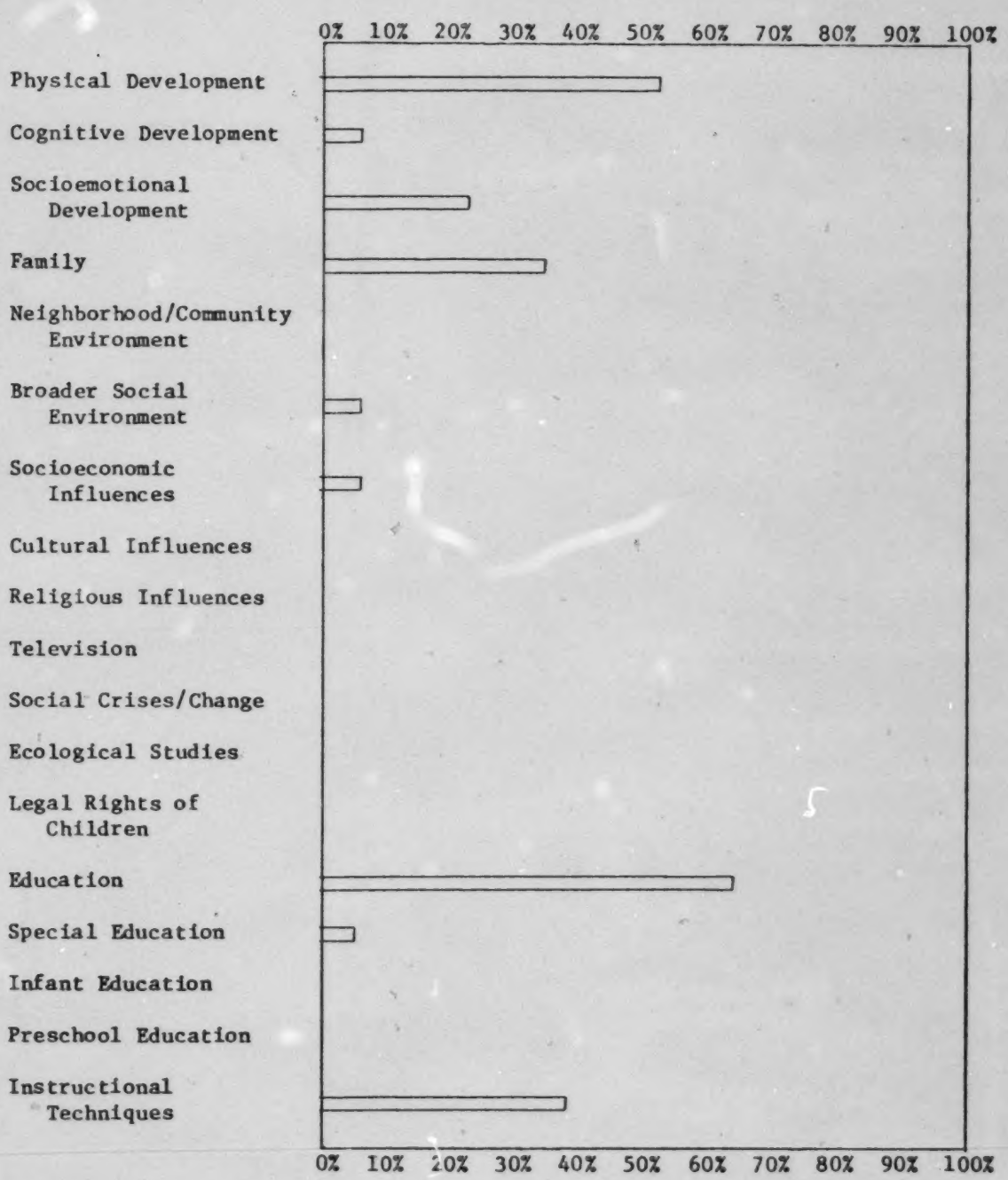
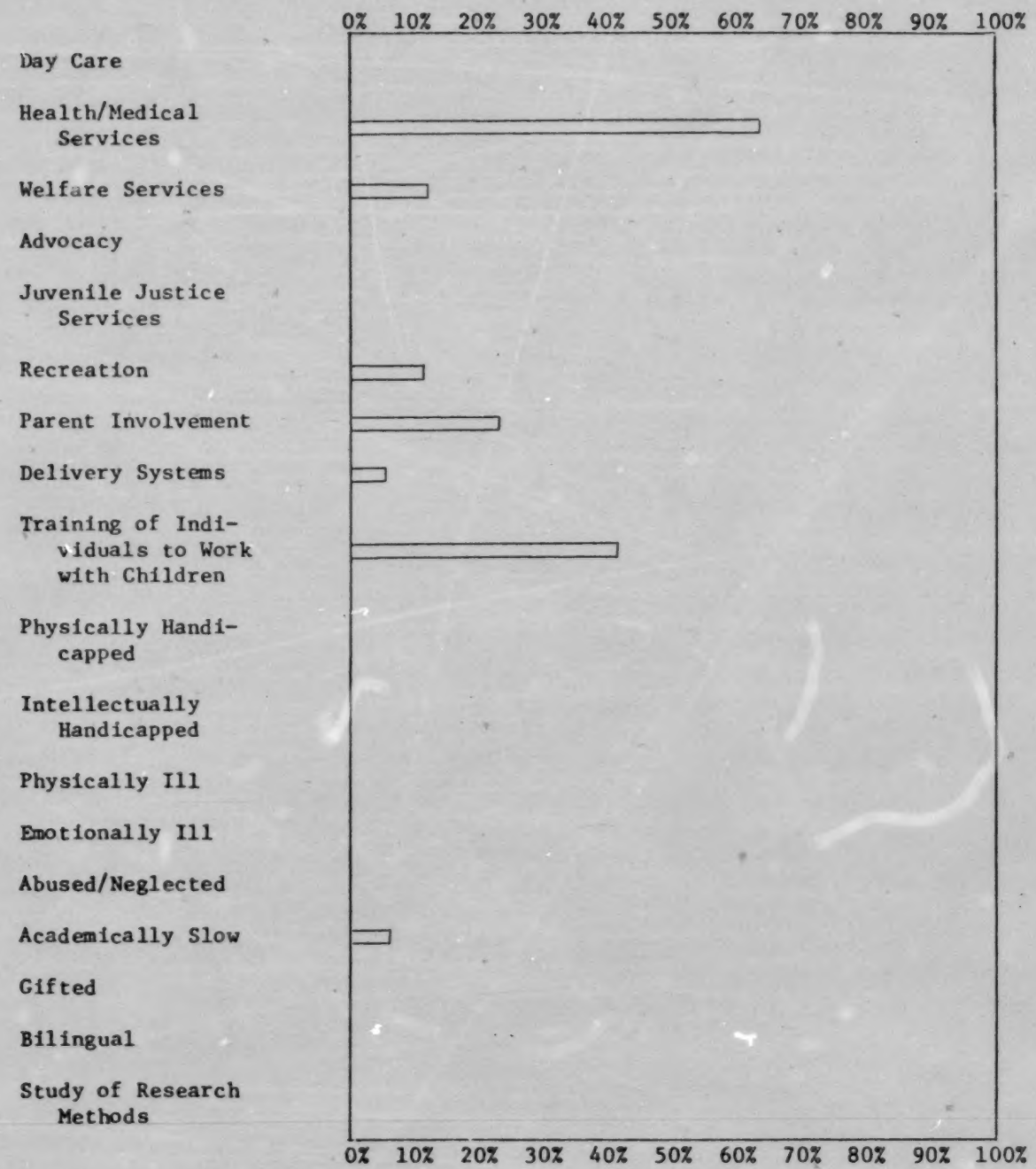


Figure 11 (Continued)

Distribution of NIAAA FY '75 Early Childhood Research Projects, by Area of Research (N=17)



Note. Categories are not mutually exclusive.

Table 42

Distribution of NIAAA FY '75
Early Childhood Projects, By Kind of Research

Kind of Research	%[a]
Basic	29.4
Applied	64.7
Pilot Study	0.0
Development	17.7
Demonstration and/or Replication	17.7
Evaluation	5.9
Research Support and Utilization Activities	0.0
Policy Research	0.0

Note. Categories are mutually exclusive, except that the applied research category subsumes the three subcategories indented below it (thus only the figures shown for the five general categories should sum to 100%).

[a]Percentage of total NIAAA FY '75 early childhood research (17 projects).

Table 43

Breakdown of NIAAA FY '75 Early Childhood Research Projects
On Physical and Socioemotional Development

Category	%[a]
Total Research on Physical Development	52.9
Alcohol Abuse	41.2
Pregnancy and Childbirth	17.7
Nutrition	5.9
Drug Abuse	5.9
Physical Disease or Illness	5.9
Motor Development	5.9
Body Growth	5.9

Table 44

Breakdown of NIAAA FY '75 Early Childhood Research Projects On Physical and Socioemotional Development (Continued)

Category	%[a]
Total Research on Socioemotional Development	23.5
Attitudes	17.7
Perception-of-Self	11.8
Interpersonal Relationships	5.9
Development of Values/Morals	5.9

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total NIAAA FY '75 early childhood research (17 projects).

Table 45

Breakdown of NIAAA FY '75 Early Childhood Research Projects on the Family

Category	%[a]
Total Research on Family	35.3
Parental Roles and Behavior	11.8
Parent-Child Relationships	11.8
Family Health	11.8
Family Structure	5.9
Parent Training	5.9

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total NIAAA FY '75 early childhood research (17 projects).

Table 46

Breakdown of NIAAA FY '75 Early Childhood
Research Projects on Instructional Techniques

Category	%[a]
Total Research on Instructional Techniques	17.7
Volunteer Community Service	5.9
Tutorial Instruction	5.9
Television Instruction	5.9

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total NIAAA FY '75 early childhood research (17 projects).

Table 47

Breakdown of NIAAA FY '75 Early Childhood
Research Projects on Educational Curriculum

Category	%[a]
Total Research on Educational Curriculum	64.7
Drug Abuse Education	64.7

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total NIAAA FY '75 early childhood research (17 projects)

Bureau of Community Health Services*
Health Services Administration
Public Health Service, DHEW

- FY '75 Funding of Early Childhood Research: $5.4 million
- Number of Early Childhood Research Projects Active in FY '75: 84
- Mission and/or Functions in Early Childhood Research:

The purpose of the Maternal and Child Health and Cripplied Children's Services research grants program of BCHS is to support scientific studies that show promise of improving the operation, functioning, general usefulness, and effectiveness of health services for mothers and children.

Description of FY '75 Early Childhood Research Activity

The research emphasis for BCHS is on projects designed to investigate and improve the health status of mothers and children. Figure 12 displays the high percentage of research support in the areas of physical development (70%) and health and medical services (68%). A large portion of BCHS research is categorized as applied, indicating the agency's service-oriented approach to physical development. Studies of health issues related to pregnancy and childbirth (37%) comprise the major focus of interest in this category.

In addition to its interest in the current status of child health, BCHS supports research on health problems of children. Handicapping conditions represent 16 percent of the projects while physical disease is studied in 11 percent of the work. Additional health-related areas of interest are body growth (13%), child abuse (6%), and studies of epidemiology (5%).

BCHS research focused on the family (23%) concerns parental roles and behavior (13%), parent-child relationships (10.7%), and family health (9%).

*This Section describes research activities of the Maternal and Child Health Research Program within the Bureau of Community Health Services.

Figure 12

Distribution of BCHS FY '75 Early Childhood Research Projects, by Area of Research (N=84)

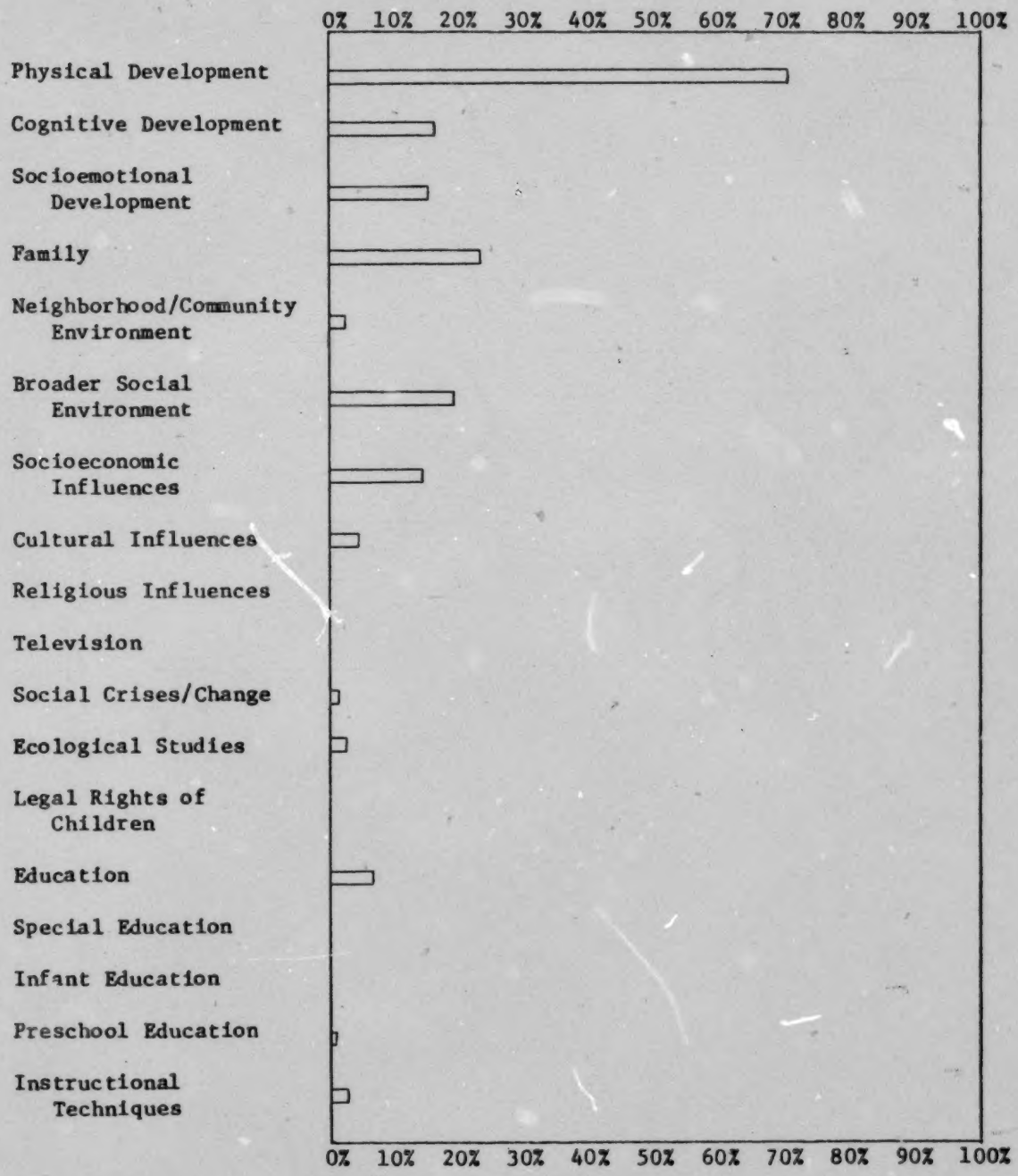
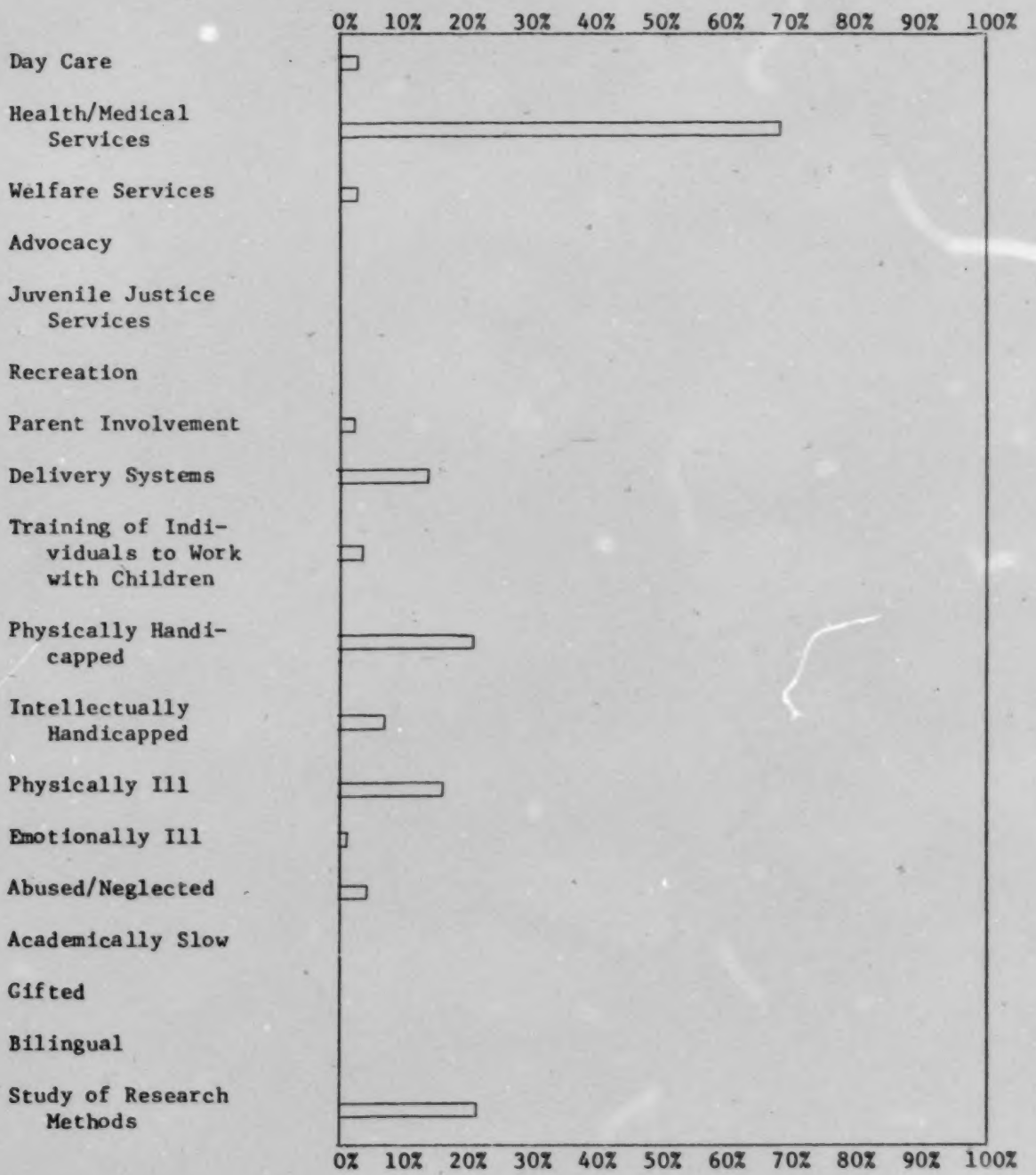


Figure 12 (Continued)

Distribution of BCHS FY '75 Early Childhood Research Projects, by Area of Research (N=84)



Note. Categories are not mutually exclusive.

Table 48

Distribution of BCHS FY '75
Early Childhood Projects, By Kind of Research

Kind of Research	%[a]
Basic	21.4
Applied	45.2
Pilot Study	0.0
Development	22.6
Demonstration and/or Replication	9.5
Evaluation	22.6
Research Support and Utilization Activities	2.4
Policy Research	8.4

Note. Categories are mutually exclusive, except that the applied research category subsumes the three subcategories indented below it (thus only the figures shown for the five general categories should sum to 100%).

[a]Percentage of total BCHS FY '75 early childhood research (84 projects).

Table 49

Breakdown of BCHS FY '75 Early Childhood
Research Projects Relating to Handicapped Children

Category	%[a]
Total Research on Handicapped Children	25.0
Neurologically Handicapped	6.1
Mentally Retarded	6.0
Orthopedically Handicapped	4.8
Aurally Handicapped	2.4
Visually Handicapped	1.2
Communicative Disorders	1.2

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total BCHS FY '75 early childhood research (84 projects).

Table 50

Breakdown of BCHS FY '75 Early Childhood Research Projects On Physical, Cognitive and Socioemotional Development

Category	%[a]
Total Research on Physical Development	70.2
Pregnancy and Childbirth	36.9
Physical Handicaps	15.5
Body Growth	13.1
Physical Disease or Illness	10.7
Child Abuse/Neglect	6.0
Nutrition	6.0
Epidemiology	4.8
Motor Development	3.6
Physical Characteristics	2.4
Genetics	2.4
Drug Abuse	1.2
Pharmacology	1.2
Total Research on Cognitive Development	16.7
Cognitive Achievement	15.5
Intellectual Handicaps	4.8
Language	4.8
Perception	2.4
Learning	1.2
Total Research on Socioemotional Development	15.5
Emotional Development	6.0
Perception-of-Self	3.6
Social Behavior	2.4

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total BCHS FY '75 early childhood research (84 projects).

Table 51

Breakdown of BCHS FY '75 Early Childhood Research Projects on the Family

Category	%[a]
Total Research on Family	23.8
Parental Roles and Behavior	13.1
Parent-Child Relationships	10.7
Family Health	9.5
Child Rearing	7.1
Family Structure	2.4
Parent Training	2.4

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total BCHS FY '75 early childhood research (84 projects).

National Institute of Education, DHEW

- FY '75 Funding of Early Childhood Research: $37.8 million
- Number of Early Childhood Research Projects Active in FY '75: 296
- Mission and/or Function in Early Childhood Research:

The primary purpose of NIE is to improve education through research and development in order to: (a) help solve or alleviate the problems of, and achieve the objectives of American education; (b) advance the practice of education; (c) strengthen the scientific and technical foundations of education; and (d) build an effective research and development system.

Early childhood research is not a separate priority of NIE. Instead research in early childhood is undertaken primarily insofar as it relates to the following priority, goal-oriented activities:

(1) Dissemination. The NIE dissemination effort provides information on the results of educational research and development. To assure that these results are implemented in the classroom, grants and contracts are made with state educational agencies and other agencies to assist in the development of comprehensive dissemination programs. NIE also disseminates materials through its ERIC clearinghouses, e.g., the ERIC Clearinghouse on Early Childhood Education.

(2) Basic Skills: In order to improve basic learning skills, NIE funds research activities aimed at: establishing benchmarks of competency in basic skills, determining causes for failure to attain adequate levels of competence in basic skills; improving instruction in the schools for teaching reading and mathematics; and replicating successes in classrooms where the need is greatest. Specific activities designed to improve basic skills are the Reading Improvement Laboratory which conducts projects designed to overcome differences in learning styles and needs among children ages 3-12, and Individually Guided Education which includes a new pattern of school operation where students are grouped not by grade but by age ranges (e.g., 4-6, 7-9).

(3) Educational Equity: Equality of educational opportunity is denied many children because of their language or ethnic background, sex or economic status. To address these problems, NIE undertakes activities devoted to improving bilingual and multicultural programs in both elementary and secondary schools, improving teacher practices, expanding the range of educational options available to women, and improving learning opportunities for children, particularly for those in metropolitan areas. An example is the Early Childhood Program which provides curricular materials for Spanish-speaking children ages 3-5 and develops tests to measure the language competence of bilingual children in their primary language.

(4) Education and Work: NIE supports programs which prepare students with the knowledge, information, and skills for choosing and pursuing a career. Specifically, activities are provided to improve current guidance, counseling, and placement programs and to increase career awareness among children.

(5) Finance, Productivity and Management: Grants and contracts are awarded to states and educational institutions to support school finance reform activities, provide a more efficient use of educational resources, and help school systems improve their oganization and management. Examples of projects in this area include the use of satellite facilities to provide educational services to persons in remote geographic areas, and the Experimental Schools Program which develops and tests alternative forms of school programs and systems.

Description of FY '75 Early Childhood Research Activity

In FY '75 NIE supported a wide range of projects designed to improve the quality of education for children. A little more than 45 percent of the research is categorized as applied, with 21 percent of the projects devoted to development of new educational services and techniques. Educational curriculum (41%) is an area of heavy concentration within which math (12%), language arts (19%), reading (15%), and career education (7%) receive the most attention.

Another significant NIE focus is the cognitive development of the child (34%). A major part of the basic research for this agency is in the following areas: language development (13%); reading processes (5%); memory (4%); and learning processes (3%).

Noticeably larger than in many agencies is the proportion of research on the family/society interface (4%), in this case pertaining to transactions between the family and the school.

Fourteen percent of the studies investigate the use of individualized curriculum as a teaching technique. Also under investigation are other educational innovations such as bilingual instruction, the voucher system, television instruction and open-classrooms.

The development of improved research methodology and dissemination of educational research is another concern of NIE, as shown in the

substantial allocation of work on the research process (17%). This figure includes the NIE support of the ERIC Clearinghouse network of information and dissemination systems.

Table 52

Distribution of NIE FY '75
Early Childhood Projects, By Kind of Research

Kind of Research	%[a]
Basic	23.3
Applied	45.3
Pilot Study	.3
Development	21.0
Demonstration and/or Replication	14.2
Evaluation	12.5
Research Support and Utilization Activities	15.5
Policy Research	3.4

Note. Categories are mutually exclusive, except that the applied research category subsumes the three subcategories indented below it (thus only the figures shown for the five general categories should sum to 100%).

[a]Percentage of total NIE FY '75 early childhood research (296 projects).

Figure 13

Distribution of NIE FY '75 Early Childhood Research Projects, by Area of Research (N=296)

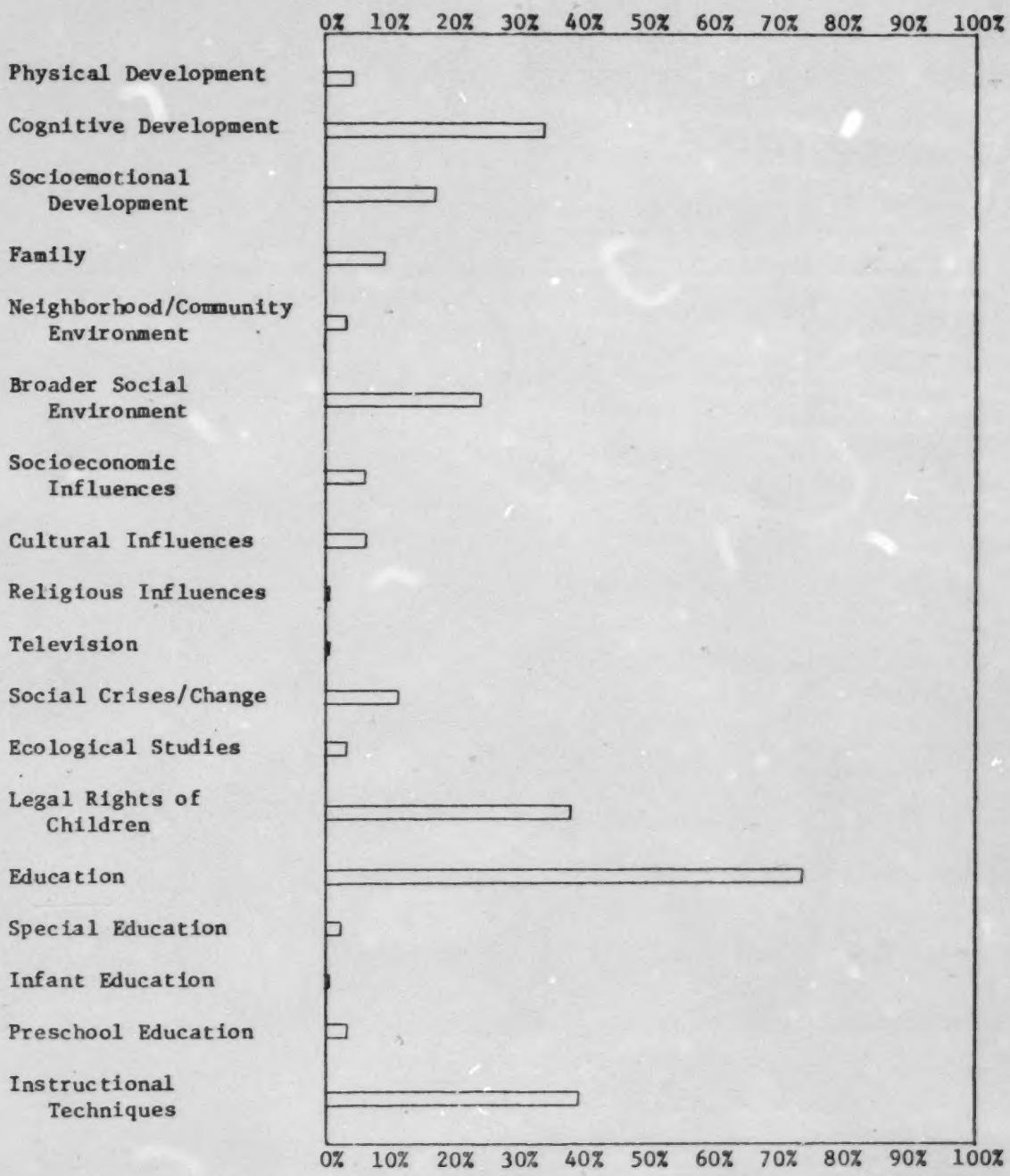
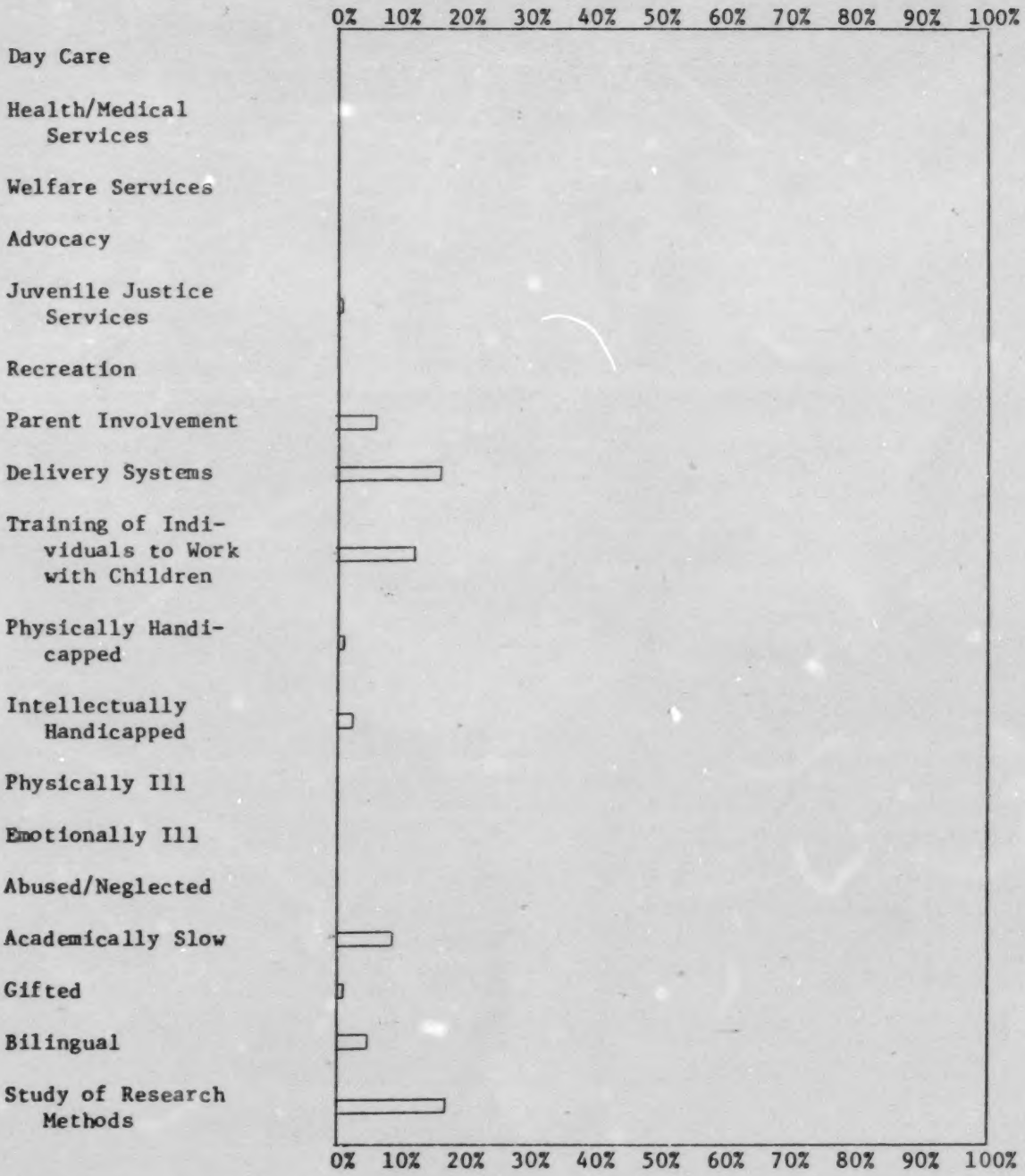


Figure 13 (Continued)

Distribution of NIE FY '75 Early Childhood Research Projects, by Area of Research (N=296)



Note. Categories are not mutually exclusive.

Table 53

Breakdown of NIE FY '75 Early Childhood Research Projects on Cognitive and Socioemotional Development

Category	%[a]
Total Research on Cognitive Development	33.8
Cognitive Achievement	16.6
Language	12.5
Reading	5.1
Memory	4.1
Learning	3.4
Perception	2.7
Problem-Solving	1.7
Attention	.7
Concept Formation	.7
Computer Simulation of Thought	.7
Intellectual Handicaps	.7
Creativity	.3
Total Research on Socioemotional Development	17.2
Attitudes	9.5
Interpersonal Relationships	6.4
Perception-of-Self	5.4
Social Development	3.0
Development of Values/Morals	1.4
Motivation	1.4
Emotional Development	1.0
Personality	.7

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total NIE FY '75 early childhood research (296 projects).

Table 54

Breakdown of NIE FY '75 Early Childhood Research Projects on the Family

Category	%[a]
Total Research on Family	8.8
Family Interface	4.0
Parental Roles and Behavior	2.7
Family Structure	1.7
Parent Training	1.4
Parent-Child Relationships	1.0
Sibling Relationships	.7
Ecology of the Home	.3
Child Rearing	.3

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total NIE FY '75 early childhood research (296 projects).

Table 55

Breakdown of NIE FY '75 Early Childhood Research Projects on Educational Curriculum

Category	%[a]
Total Research on Educational Curricula	41.2
Language Arts	18.9
Reading	15.2
Math	11.5
Career Education	7.4
Cultural Awareness	2.4
Fine Arts	2.0
Vocational/Technical Education	2.0
Social Studies	1.4
Physical Education	1.3
Science	1.0
Health Education	1.0
Environmental Studies	.7
Citizenship Training	.3

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total NIE FY '75 early childhood research (296 projects).

Table 56

Breakdown of NIE FY '75 Early Childhood
Research Projects on Instructional Techniques

Category	%[a]
Total Research on Instructional Techniques	41.2
Individualized Instruction	14.2
Television Instruction	3.7
Open-Classroom Instruction	3.4
Bilingual Instruction	2.7
Voucher System	2.4
Peer Teaching	1.0
Non-Graded Instruction	1.0
Team Teaching	.7
Volunteer Community Service	.3
Cross-Age Instruction	.3
Tutorial Instruction	.3

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total NIE FY '75 early childhood research (296 projects).

U.S. Office of Education, DHEW

- FY '75 Funding of Early Childhood Research: $188.5 million
- Number of Early Childhood Research Projects Active in FY '75: 1,236
- Mission and/or Function in Early Childhood Research:

The Office of Education's functions are to collect facts and statistics to show the condition and progress of education, to diffuse information to aid in the establishment and maintenance of efficient school systems and otherwise to promote the cause of education. Related functions delegated to OE include the responsibility for Federal financial assistance to education and for special studies and programs. This report will describe seven sections of OE which engage in development, demonstration and evaluation activities affecting children: the Bureau of Education for the Handicapped, the Bureau of School Systems, the Office of Indian Education, the Bureau of Occupational and Adult Education, the Office of Career Education, the Office of Planning, Budgeting, and Evaluation, and the Right-To-Read Effort. The activities of these sections are further analyzed on the following pages.

Description of FY '75 Early Childhood Research Activity

The Office of Education supports the most work, both in numbers of projects and in size of budget, for development and demonstration related to children in FY '75. Data was collected for only those projects administered at the Federal level.

Table 57 presents a breakdown of early childhood projects by kind of research for OE as a whole. The majority of projects funded in FY '75 by OE are categorized as demonstration (78.9%). This figure reflects the OE emphasis on the demonstration of innovative educational models. Most of the remaining research is directed at the development of educational models, curricula and materials (13%), with a small amount of activity relating to evaluation (2%), and research support and utilization activities.

The individual divisions of OE, which support activities in different areas of research, also show some differences in the kind of research they support. The Bureau of School Systems, Right-To-Read, and the Office of Career Education all primarily support demonstration projects (96%, 96%, and 85%, respectively). The Bureau of Education for the Handicapped and

the Office of Indian Education, while also supporting a high percentage of demonstrations (58% and 76%) undertake a substantial number of development projects as well (20% and 18%). In contrast, the majority of projects funded by the Bureau of Occupational and Adult Education involve development activities (68%). Finally, the FY '75 projects of the Office of Planning, Budgeting, and Evaluation are for the most part evaluations (72%), but also involve research support and utilization activities (11%) and policy research (11%).

Table 57

Distribution of OE FY '75
Early Childhood Projects, By Kind of Research

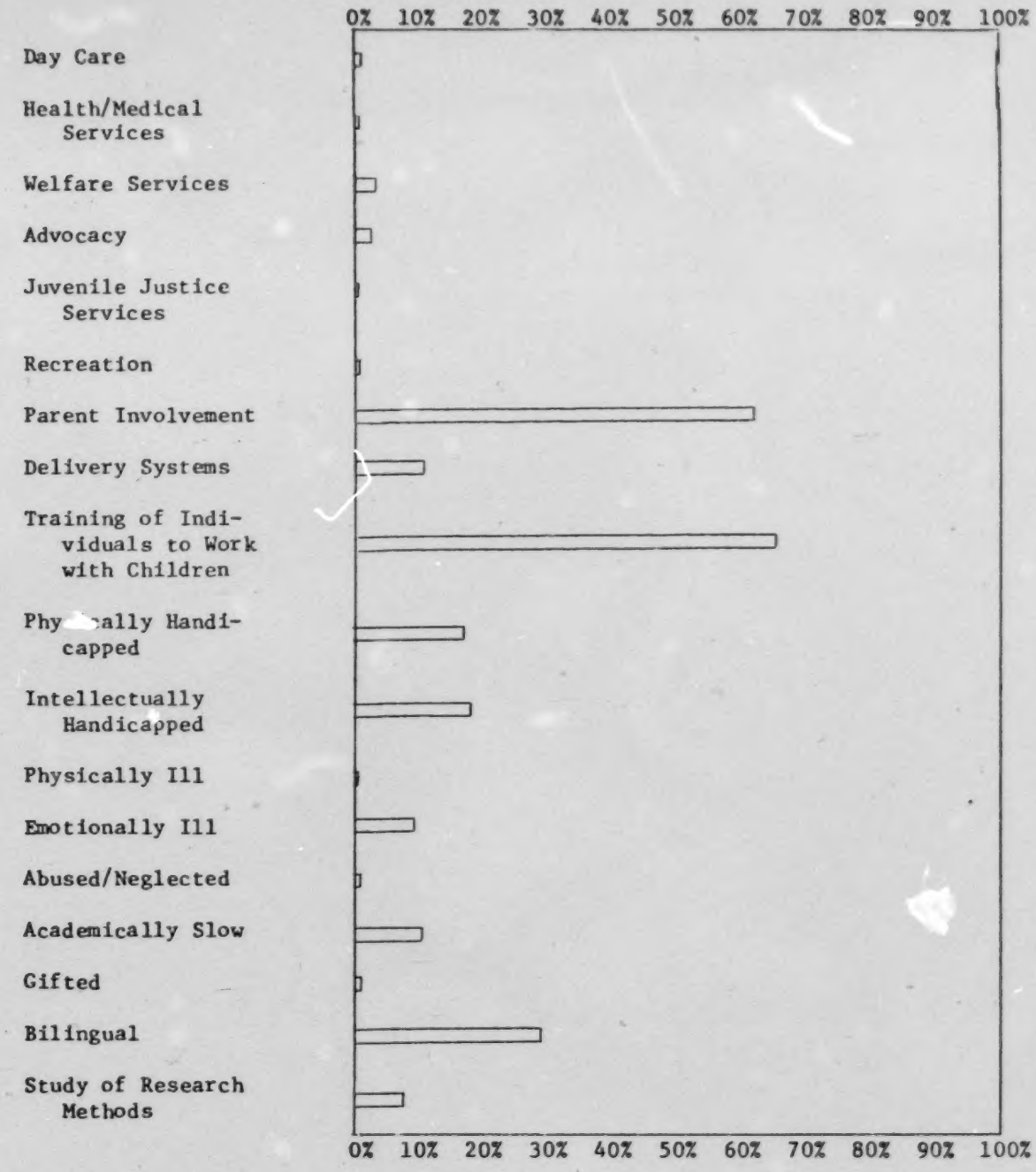
Kind of Research	%[a]
Basic	1.8
Applied	93.3
Pilot Study	.6
Development	12.7
Demonstration and/or Replication	77.6
Evaluation	2.1
Research Support and Utilization Activities	2.2
Policy Research	.7

Note. Categories are mutually exclusive, except that the applied research category subsumes the three subcategories indented below it (thus only the figures shown for the five general categories should sum to 100%).

[a]Percentage of total OE FY '75 early childhood research (1,236 projects).

Figure 14 (Continued)

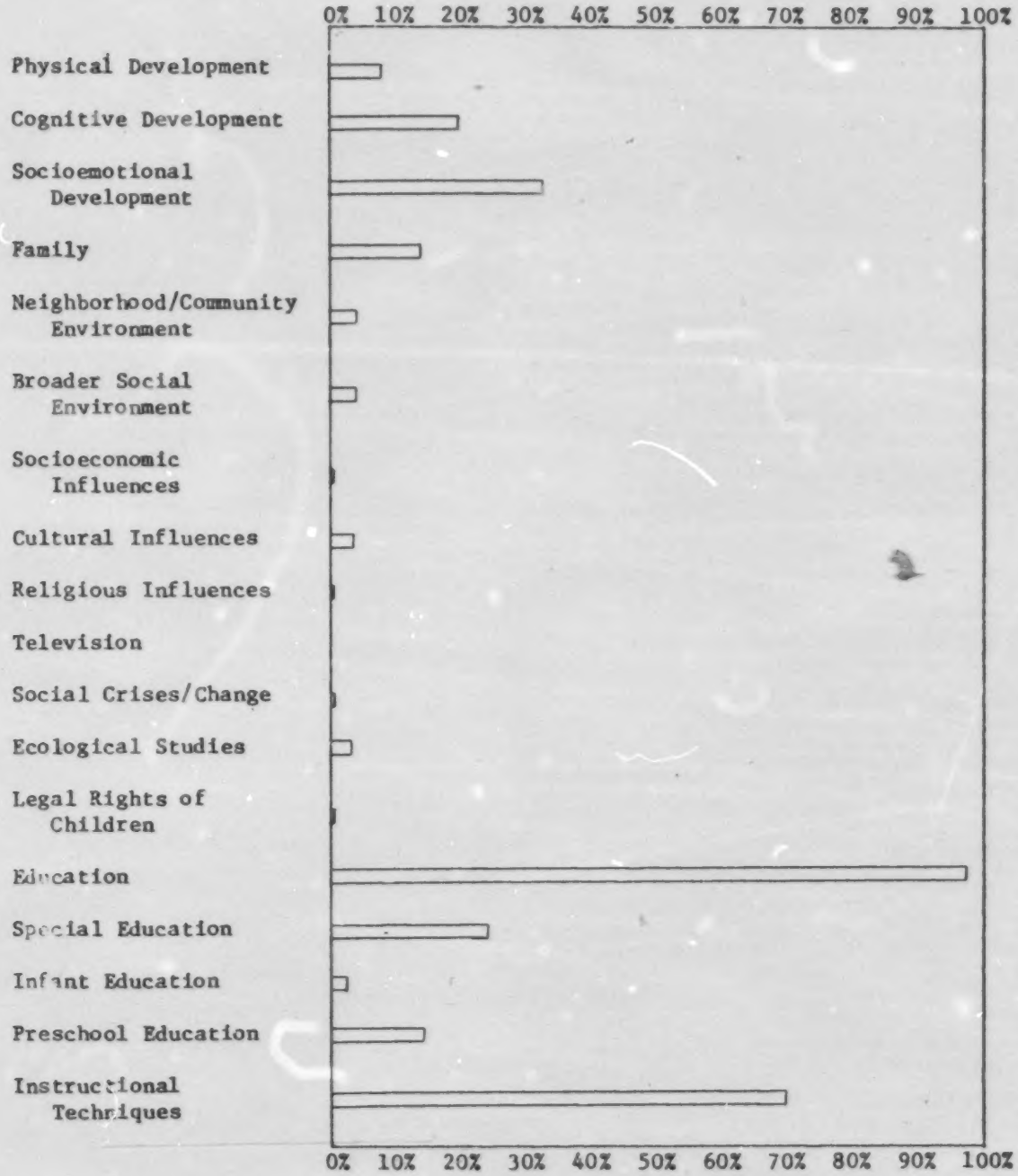
Distribution of OE FY '75 Early Childhood Research Projects, by Area of Research (N=1236)



Note. Categories are not mutually exclusive.

Figure 14

Distribution of OE FY '75 Early Childhood Research Projects, by Area of Research (N=1236)



Bureau of Education for the Handicapped
U.S. Office of Education, DHEW

- FY '75 Funding of Early Childhood Research: $43.2 million
- Number of Early Childhood Research Projects Active in FY '75: 329
- Mission and/or Functions in Early Childhood Research:

The mission of the Bureau of Education for the Handicapped is to insure that all handicapped children receive appropriate educational services to enable them to develop their fullest potential and thereby reduce their degree of dependency. BEH research goals at the early childhood level include: (1) improving procedures for early identification of children at risk; (2) determining ways to make preschool services more appropriate to the unique needs of handicapped children; and (3) disseminating valid identification, assessment, and intervention information to those who are responsible for the establishment and maintenance of service delivery systems.

Description of FY '75 Early Childhood Research Activity

BEH is a bureau within OE which focuses on a particular target population--children with handicapping conditions. Table 60 displays a breakdown of the kinds of handicapped children served by BEH projects. The heaviest concentration of work is on the mentally retarded child (37%) and children with learning disabilities (33%). BEH also supports a significant amount of research on children who are aurally handicapped (27%), and visually handicapped (20%).

Several aspects of the development of the child receive considerable attention in FY '75 projects. In the area of physical development, motor development (13%) is the most frequently investigated. Language development is a factor in 20 percent of the projects supported by BEH, along with cognitive achievement (17%) and perception (10%). Within the category of socioemotional development, the factors included most often in FY '75 research are interpersonal relationships (7%) and self-concept (6%). A major component of BEH demonstration projects is the training of parents (33%) to better understand and teach their handicapped children. Often BEH research emphases are on the development of educational curricula (48%) and innovative teaching techniques (47%) such as individualized curriculum (30%), as well as on the development of media aids and other educational materials.

Figure 15

Distribution of BEH FY '75 Early Childhood Research Projects, by Area of Research (N=329)

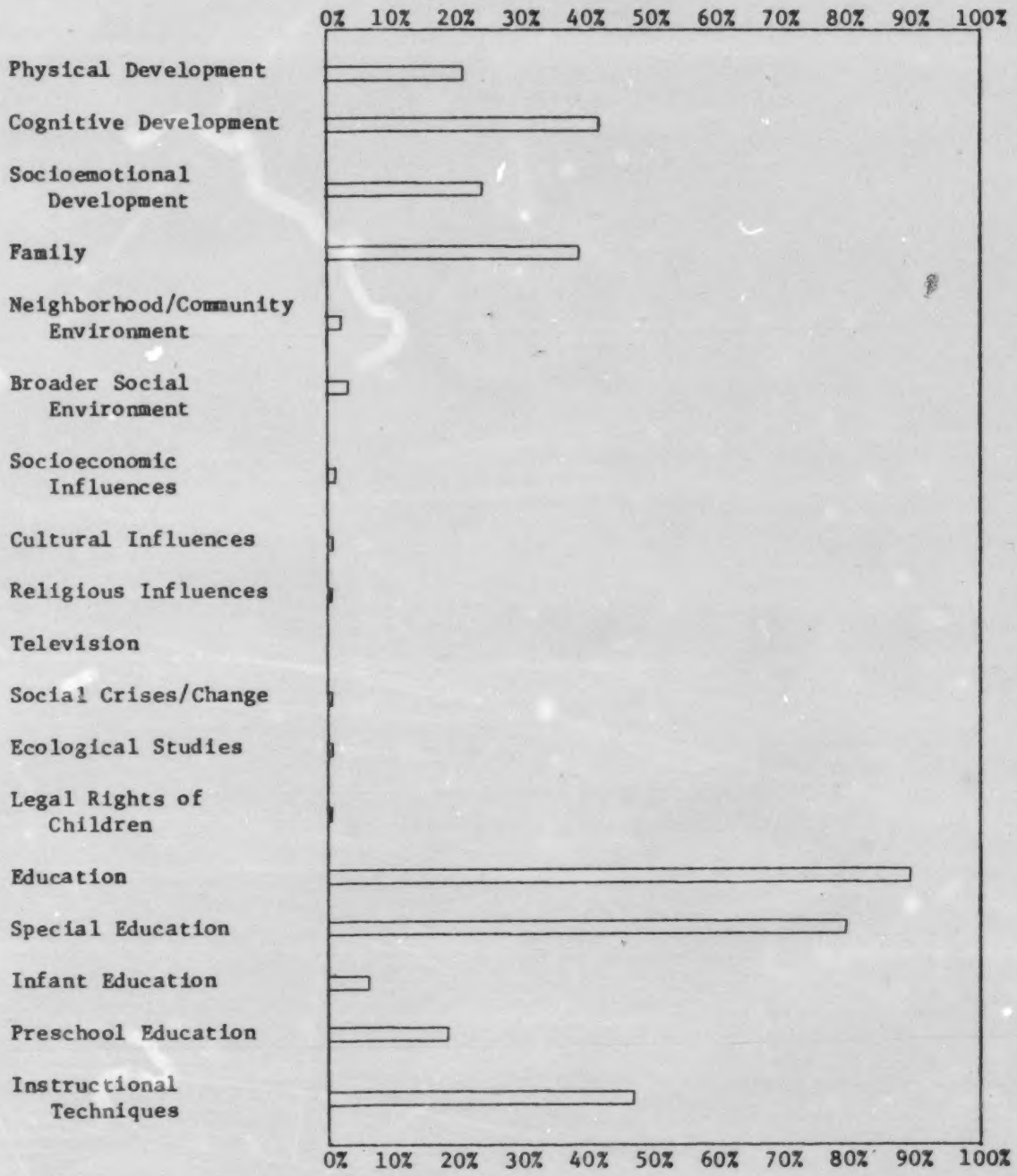
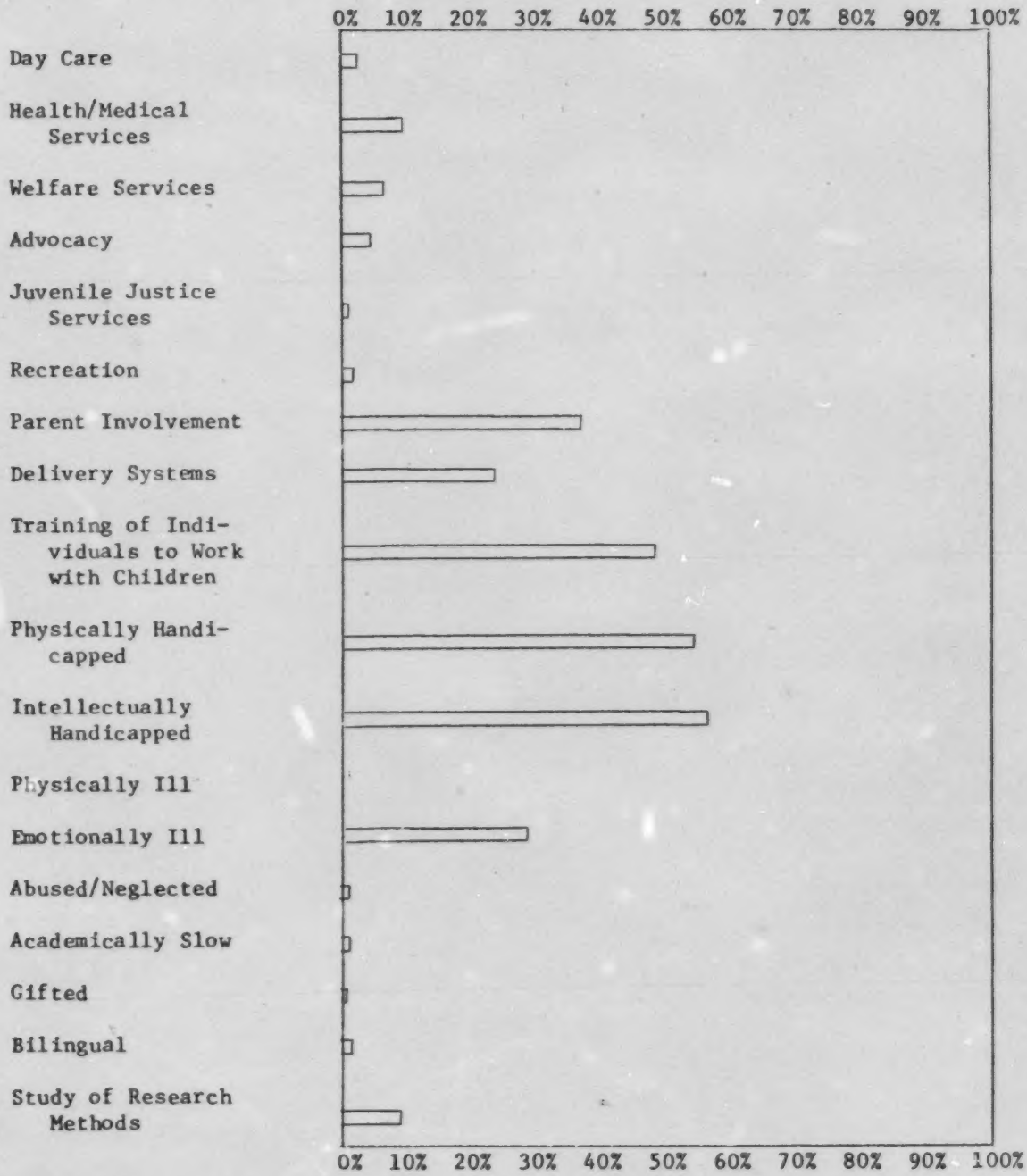


Figure 15 (Continued)

Distribution of BEH FY '75 Early Childhood Research Projects, by Area of Research (N=329)



Note. Categories are not mutually exclusive.

Table 58

Breakdown of BEH FY '75 Early Childhood Research Projects On Physical, Cognitive and Socioemotional Development

Category	%[a]
Total Research on Physical Development	21.0
Motor Development	13.4
Physical Handicaps	6.1
Sensory Development	4.9
Body Growth	.9
Injury/Accident/Trauma	.3
Pregnancy and Childbirth	.3
Total Research on Cognitive Development	42.0
Language	20.4
Cognitive Achievement	16.7
Intellectual Handicaps	11.6
Perception	10.3
Concept Formation	4.9
Problem-Solving	3.7
Learning	2.4
Attention	.9
Memory	.9
Reading	.9
Creativity	.3
Total Research on Socioemotional Development	23.7
Interpersonal Relationships	6.7
Perception-of-Self	5.5
Emotional Development	4.6
Social Behavior	2.7
Attitudes	2.4
Personality	1.5
Motivation	.6

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total BEH FY '75 early childhood research (329 projects).

Table 59

Breakdown of BEH FY '75 Early Childhood Research Projects on the Family

Category	%[a]
Total Research on Family	38.6
Parent Training	33.1
Parental Roles and Behavior	23.8
Parent-Child Relationships	19.1
Family Health	10.3
Child Rearing	2.1
Ecology of the Home	.9
Sibling Relationships	.9
Family Interface	.3

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total BEH FY '75 early childhood research (329 projects).

Table 60

Breakdown of BEH FY '75 Early Childhood Research Projects Relating to Handicapped Children

Category	%[a]
Total Research on Handicapped Children	93.9
Mentally Retarded	36.8
Learning Disabled	32.8
Aurally Handicapped	27.1
Communicative Disorders	24.6
Visually Handicapped	20.1
Orthopedically Handicapped	16.4
Neurologically Handicapped	9.7

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total BEH FY '75 early childhood research (329 projects).

Table 61

Breakdown of BEH FY '75 Early Childhood
Research Projects on Instructional Techniques

Category	%[a]
Total Research on Instructional Techniques	47.1
Individualized Instruction	29.5
Team Teaching	2.7
Tutorial Instruction	2.1
Non-Graded Instruction	.9
Peer Teaching	.6
Television Instruction	.6
Open Classroom	.6
Volunteer Community Service	.3
Cross-Age Instruction	.3

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total BEH FY '75 early childhood research (329 projects).

Table 62

Breakdown of BEH FY '75 Early Childhood
Research Projects on Educational Curriculum

Category	%[a]
Total Research on Educational Curriculum	48.3
Language Arts	13.4
Math	4.9
Reading	4.3
Physical Education	3.0
Health Education	2.1
Fine Arts	1.8
Education for Parenthood	1.2
Cultural Awareness	.9
Vocational/Technical Education	.9
Social Studies	.6
Drug Abuse Education	.3
Sex Education	.3

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total BEH FY '75 early childhood research (329 projects).

Office of Indian Education
U.S. Office of Education, DHEW

- FY '75 Funding of Early Childood Research: $10.4 million
- Number of Early Childhood Research Projects Active in FY '75: 122
- Mission and/or Function in Early Childhood Research:

The mission of the Office of Indian Education is to fund the development and demonstration of early childhood education models designed to meet the special needs of Indian children from age three through third grade. The projects include day care centers with educational components, curriculum development and bilingual and bicultural education programs.

Description of FY '75 Early Childhood Research Activity

In FY '75 the Office of Indian Education continued to support research and demonstration projects designed to improve the education and general well-being of a specific target population--the American Indian. These comprehensive projects concern not only the delivery of specialized educational services (100%), but also the delivery of health and medical services (20%). An important component of these programs is the study of cultural influences (28%) and development of curricula for cultural awareness education (74%). In addition, the demonstration model focuses on instruction in the traditional areas of education: language arts (52%); math (26%); and reading (20%). Specific instructional techniques covered by these programs are: tutorial instruction (25%); bilingual instruction (21%); and individualized curriculum (12%). A further objective of OIE is to measure program effectiveness in terms of gains in the self-concept (26%) of the children receiving these services. OIE projects emphasize involvement of parents (59%) and many include parent training components (14%).

Figure 16

Distribution of OIE FY '75 Early Childhood Research Projects, by Area of Research (N=122)

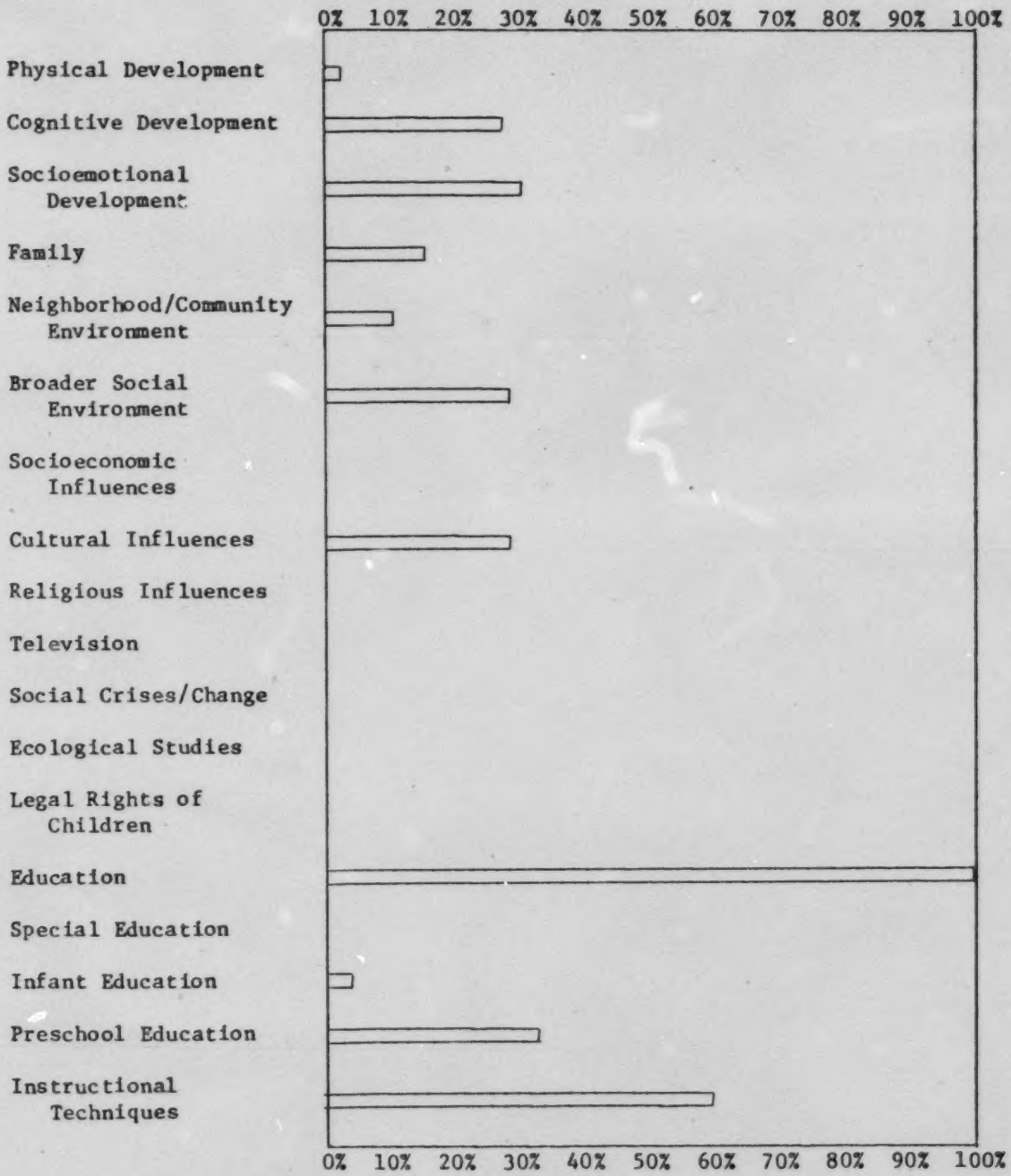
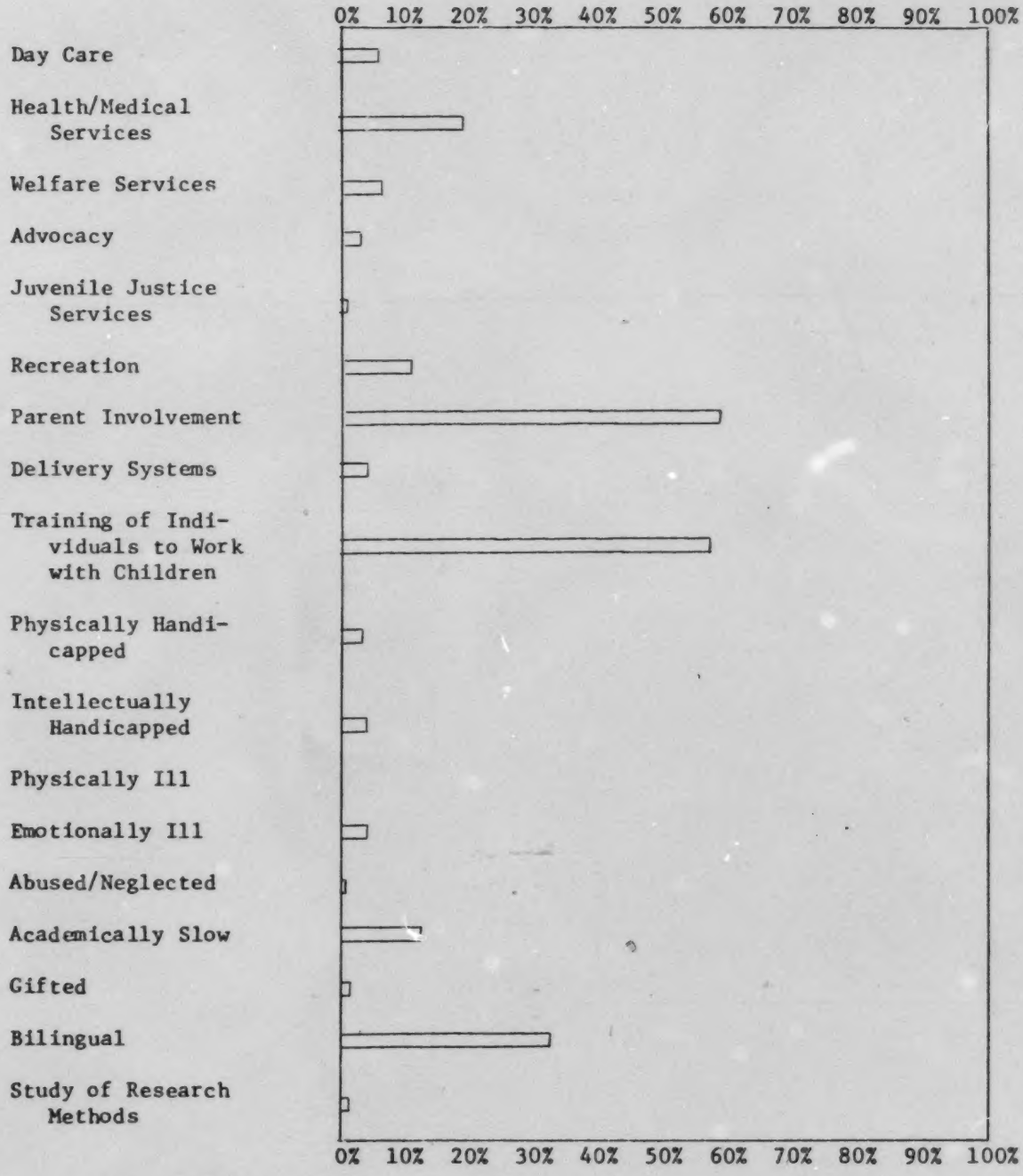


Figure 16 (Continued)

Distribution of OIE FY '75 Early Childhood Research Projects, by Area of Research (N=122)



Note. Categories are not mutually exclusive.

Table 63

Breakdown of OIE FY '75 Early Childhood Research Projects on Cognitive and Socioemotional Development

Category	%[a]
Total Research on Cognitive Development	27.9
Cognitive Achievement	24.6
Language	4.1
Perception	1.6
Intellectual Handicaps	1.6
Learning	.8
Reading	.8
Total Research on Socioemotional Development	31.8
Perception of Self	26.2
Attitudes	5.7
Interpersonal Relationships	3.3
Motivation	2.5
Emotional Development	2.5
Personality	1.6
Development of Values	1.6

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total OIE FY '75 early childhood research (122 projects).

Table 64

Breakdown of OIE FY '75 Early Childhood
Research Projects on Educational Curriculum

Category	%[a]
Total Research on Educational Curriculum	97.5
Cultural Awareness	73.8
Language Arts	51.6
Arithmetic/Math	26.2
Fine Arts	23.1
Reading	19.7
Social Studies	16.4
Science	8.2
Health Education	8.2
Career Education	5.7
Vocational/Technical Education	4.9
Physical Educatic	4.9
Environmental Studies	4.1
Education for Parenthood	3.3
Drug Abuse Education	1.6
Citizenship Training	1.6
Sex Education	.8

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total OIE FY '75 early childhood research (122 projects).

Table 65

Breakdown of OIE FY '75 Early Childhood
Research Projects on the Family

Category	%[a]
Total Research on Family	15.6
Parent Training	13.9
Parent-Child Relationships	2.5
Family Structure	.8
Parental Roles	.8
Family Health	.8
Family Interface	.8

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total OIE FY '75 early childhood research (122 projects).

Table 66

Breakdown of OIE FY '75 Early Childhood
Research Projects on Instructional Techniques

Category	%[a]
Total Research on Instructional Techniques	59.0
Tutorial Instruction	24.6
Bilingual Instruction	21.3
Individualized Instruction	11.5
Cross-Age Teaching	9.0
Volunteer Community Service	5.7
Peer Teaching	1.6
Voucher System	.8
Television Instruction	.8
Open Classroom	.8
Team Teaching	.8

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total OIE FY '75 early childhood research (122 projects).

Right to Read Effort
U.S. Office of Education, DHEW

- FY '75 Funding of Early Childhood Research: $.9 million
- Number of Early Childhood Research Projects Active in FY '75: 112
- Mission and/or Functions in Early Childhood Research:

The National Right to Read Effort is a national attempt to focus on the reading literacy problems in this country. The goal of this effort is to prevent functional illiteracy and to provide corrective remediation for those who are presently experiencing the results of being functionally illiterate. The Right to Read Effort supports innovative demonstration projects designed to promote effective state and local reading programs.

Description of FY '75 Early Childhood Research Activity

The sharply defined focus of the Right to Read effort to prevent illiteracy is apparent in the bar chart, with major emphasis showing up in the areas of education, cognitive development, parent involvement, and training of individuals to work with children, all in relation to the academically slow. These projects are primarily demonstrations relating to specialized reading and language arts curricula. The assessment of gains in cognitive achievement, involved in 80 percent of the projects, accounts for the high percentage shown for cognitive development. The teaching techniques which receive most attention are individualized instruction (69%) and tutorial instruction (30%) both critical to the remedial objectives of the activity, and cross-age instruction (18%).

Slightly more than 90 percent of the projects are continued from previous fiscal years and are in their final year of activity under the Cooperative Research Act. In 68 percent of the projects, no funds were expended in FY '75.

Figure 17

Distribution of Right to Read FY '75 Early Childhood Research Projects, by Area of Research (N=112)

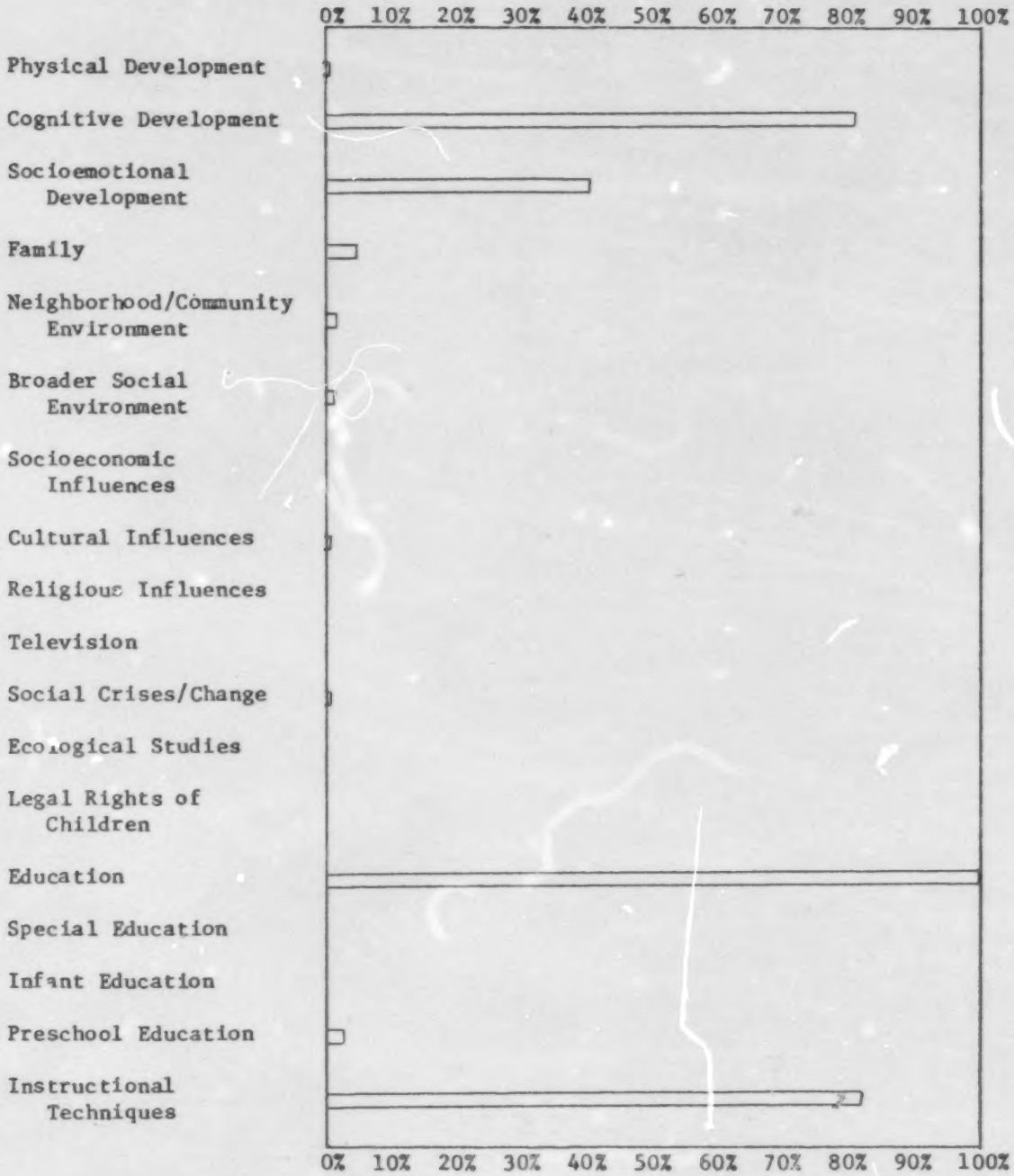
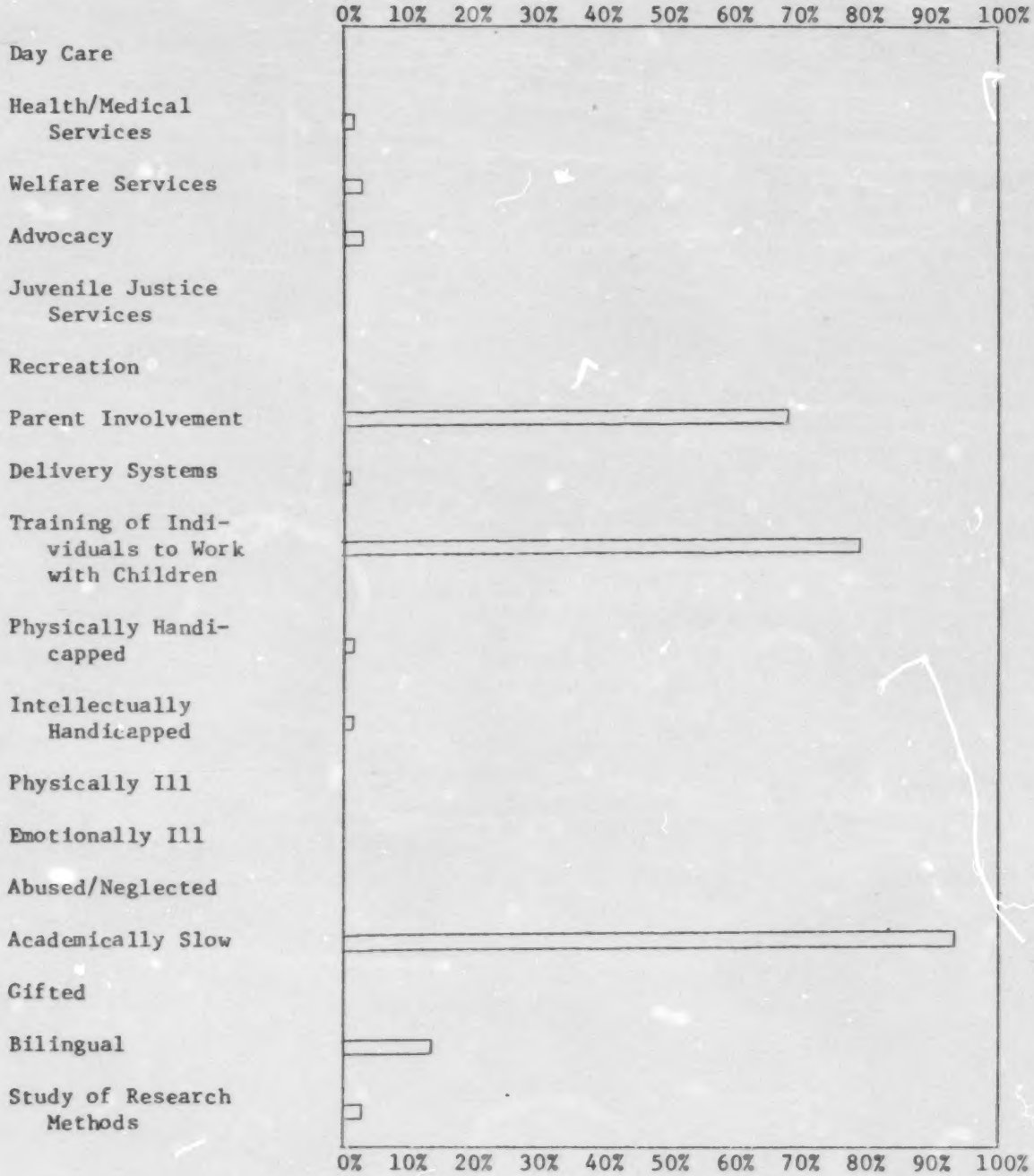


Figure 17 (Continued)

Distribution of Right to Read FY '75 Early Childhood Research Projects, by Area of Research (N=112)



Note. Categories are not mutually exclusive.

Table 67

Breakdown of Right to Read FY '75 Early Childhood Research Projects on Cognitive and Socioemotional Development

Category	%[a]
Total Research on Cognitive Development	81.3
Cognitive Achievement	79.5
Reading	11.6
Language	10.7
Perception	4.5
Learning	1.8
Attention	.9
Concept Formation	.9
Total Research on Socioemotional Development	40.2
Attitudes	30.4
Perception of Self	16.1
Motivation	7.1
Interpersonal Relationships	3.6
Social Development	.9

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total Right to Read FY '75 early childhood research (112 projects).

Table 68

Breakdown of Right to Read FY '75 Early Childhood Research Projects on Instructional Techniques

Category	%[a]
Total Research on Instructional Techniques	82.1
Individualized Instruction	68.8
Tutorial Instruction	30.4
Cross-Age Teaching	17.9
Bilingual Instruction	10.7
Team Teaching	9.8
Volunteer Community Service	9.8
Television Instruction	8.0
Peer Teaching	4.5
Open Classroom	2.7
Non-Graded Instructional Program	1.8

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total Right to Read FY '75 early childhood research (112 projects).

Table 69

Breakdown of Right to Read FY '75 Early Childhood Research Projects on Educational Curriculum

Category	%[a]
Total Research on Educational Curriculum	98.2
Language Arts	98.2
Reading	98.2
Cultural Awareness	7.1
Arithmetic/Math	1.8
Vocational/Technical Education	1.8
Career Education	1.8
Social Studies	.9
Fine Arts	.9
Physical Education	.9
Citizenship Training	.9

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total Right to Read FY '75 early childhood research (112 projects).

Bureau of School Systems
U.S. Office of Education, DHEW

- FY '75 Funding of Early Childhood Research: $115.8 million
- Number of Early Childhood Research Projects Active in FY '75: 535
- Mission and/or Functions in Early Childhood Research:

The Bureau of School Systems formulates policy for, directs, and coordinates the activities and elements of the Office of Education which deal with preschool, elementary and secondary education. Five divisions within the Bureau conduct development or demonstration activities pertinent to the Bureau's mission. (1) The Division of Plans and Supplementary Centers administers two kinds of innovative demonstration projects: those which provide solutions to state and local educational problems under the State Plan Program and those which provide solutions to problems common to all or several states under the Special Program and Project authority. (2) The Office of Environmental Education supports the development, demonstration, and dissemination of multidisciplinary, problem-oriented environmental education programs. (3) The Division of Educational Technology supports the effective employment of technology for improvement of education instruction and delivery of programs and services and supports the development of educational television and radio programming for children and for the training of parents. (4) The Division of Bilingual Education* supports the development and demonstration of educational programs, curriculum materials and teacher training programs designed to meet the needs of children who come from environments where the dominant language is not English and who have limited English-speaking ability. (5) The Division of Follow Through supports demonstration projects which provide comprehensive services--education, nutrition, health care, and social and psychological services--designed to sustain and supplement in the primary grades the gains made by low-income children who participated in a Head Start or comparable preschool program.

Description of FY '75 Early Childhood Research Projects

As indicated earlier, almost all of the projects supported by these five divisions of BSS are classified as demonstrations (96%). The Division of Bilingual Education and the Division of Follow Through address the specific educational problems of particular target groups known to be educationally disadvantaged: students for whom English is a second language, and economically disadvantaged children who have previously been exposed to a preschool enrichment program. The bar chart shows the concentration of

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*As of July 1, 1975, the Division of Bilingual Education became the Office of Bilingual Education; it is no longer located within BSS.

activity relative to education, parent involvement, training, bilingual target groups, and socioemotional development (primarily self-concept). The substantial amount of activity relating to health/medical services (29%) reflects the health and nutrition components of Follow Through projects. As Table 71 indicates, bilingual instruction figures in 54 percent of the BSS projects, individualized instruction in 8 percent, and tutorial instruction in 4 percent.

The other three divisions, Environmental Education, Plans and Supplementary Centers, and Educational Technology, focus their research on the development of new educational curricula, techniques and models. Among the eductional curricula, language arts is involved in by far the highest percentage of projects (87%), followed by math (66%), reading (56%), cultural awareness (54%), health education (29%), and social studies (27%).

Figure 18

Distribution of BSS FY '75 Early Childhood Research Projects, by Area of Research (N=535)

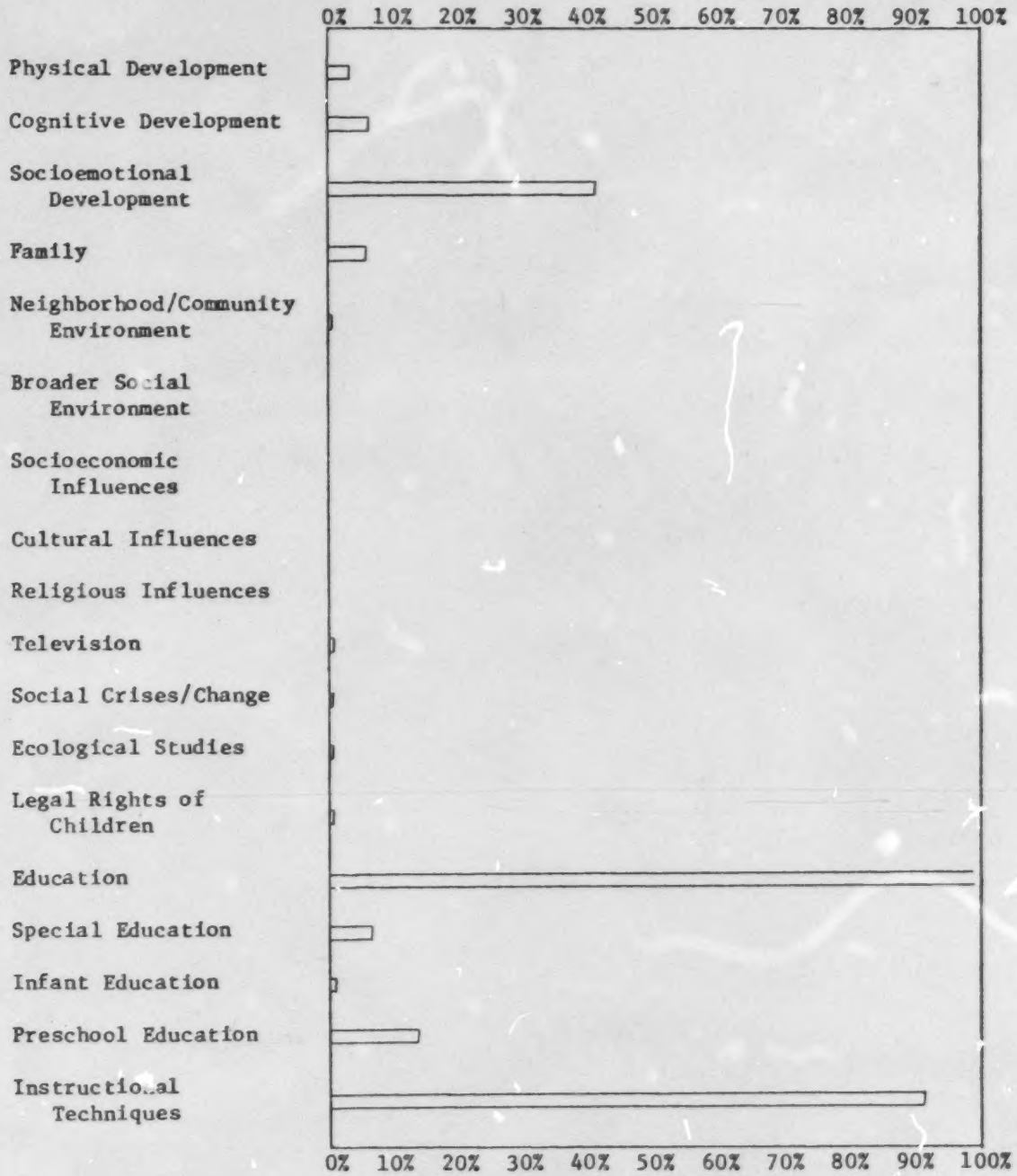
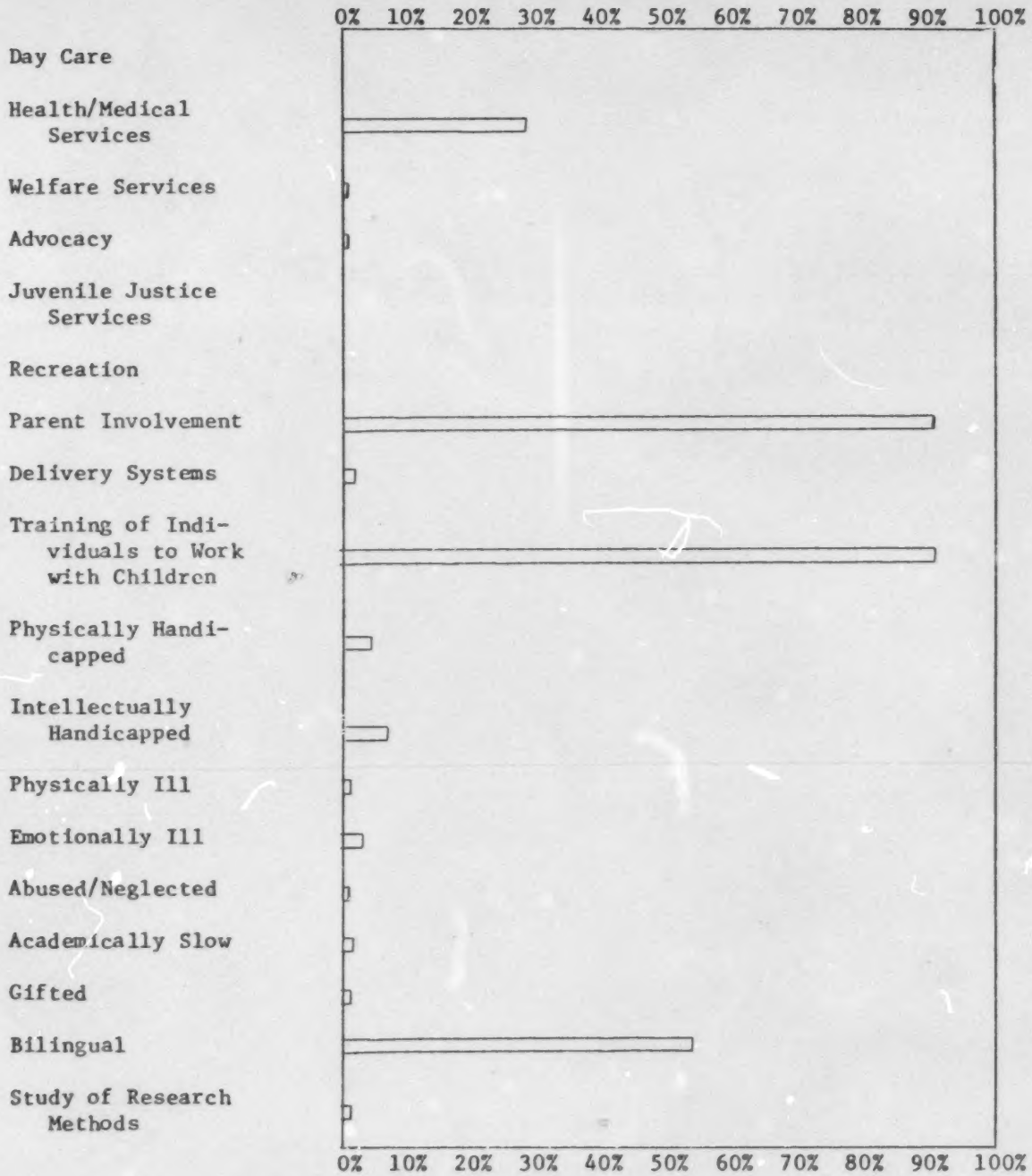


Figure 18 (Continued)

Distribution of BSS FY '75 Early Childhood Research Projects, by Area of Research (N=535)



Note. Categories are not mutually exclusive.

Table 70

Breakdown of BSS FY '75 Early Childhood Research Projects on Socioemotional Development

Category	%[a]
Total Research on Socioemotional Development	41.1
Perception of Self	39.6
Emotional Development	1.1
Attitudes	.9
Interpersonal Relationships	.7
Social Behavior	.4
Development of Values	.2
Motivation	.2
Personality	.2

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total BSS FY '75 early childhood research (535 projects).

Table 71

Breakdown of BSS FY '75 Early Childhood Research Projects on Instructional Techniques

Category	%[a]
Total Research on Instructional Techniques	92.0
Bilingual Instruction	54.0
Individualized Instruction	8.2
Tutorial Instruction	4.1
Television Instruction	1.3
Team Teaching	1.3
Cross-Age Teaching	1.1
Peer Teaching	1.1
Volunteer Community Service	.7
Non-Graded Instructional Program	.7
Open Classroom	.7

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total BSS FY '75 early childhood research (535 projects).

Table 72

Breakdown of BSS FY '75 Early Childhood Research Projects on Educational Curriculum

Category	%[a]
Total Research on Educational Curriculum	93.5
Language Arts	86.7
Arithmetic/Math	26.9
Reading	55.5
Cultural Awareness	53.8
Health Education	29.3
Social Studies	26.9
Fine Arts	13.1
Physical Education	6.4
Career Education	2.2
Environmental Studies	2.1
Vocational/Technical Education	1.1
Science	.6
Education for Parenthood	.6
Sex Education	.4

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total BSS FY '75 early childhood research (535 projects).

Bureau of Occupational and Adult Education,
U.S. Office of Education, DHEW

- FY '75 Funding of Early Childhood Research $3.0 million
- Number of Early Childhood Research Projects Active in FY '75: 62
- Mission and/or Functions in Early Childhood Research:

Goals of the BOAE Center for Adult, Vocational, Technical, and Manpower Education include the improvement and expansion of vocational educational guidance, counseling, placement, and follow-up systems, the improvement and expansion of cooperative education, and increasing the integration of handicapped students into vocational education programs. The research and development program in vocational education begins at the elementary school level and includes children nine and younger as well as adolescents.

Description of FY '75 Early Childhood Research Activity

Although BOAE research is primarily aimed at supporting projects which will benefit adolescents and adults, the agency does fund research and demonstration programs in career education (31%) and vocational/technical education (74%) directed towards elementary school children. Research areas include: curricula studies, e.g. the development of individualized and performance oriented curricula, the identification of emerging occupations and the resulting curriculum and manpower needs, and the identification of a common core of basis skills for occupational clusters.

Table 73

Breakdown of BOAE FY '75 Early Childhood
Research Projects on Instructional Techniques

Category	%[a]
Total Research on Instructional Techniques	21.0
Work Experience	14.5
Individualized Instruction	3.2
Team Teaching	3.2
Bilingual Instruction	1.6

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total BOAE FY '75 early childhood research (62 projects).

Table 74

Breakdown of BOAE FY '75 Early Childhood
Research Projects on Educational Curriculum

Category	%[a]
Total Research on Educational Curriculum	90.3
Vocational/Technical Education	74.2
Career Education	30.7
Science	1.6

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total BOAE FY '75 early childhood research (62 projects).

Figure 19

Distribution of BOAE FY '75 Early Childhood Research Projects, by Area of Research (N=62)

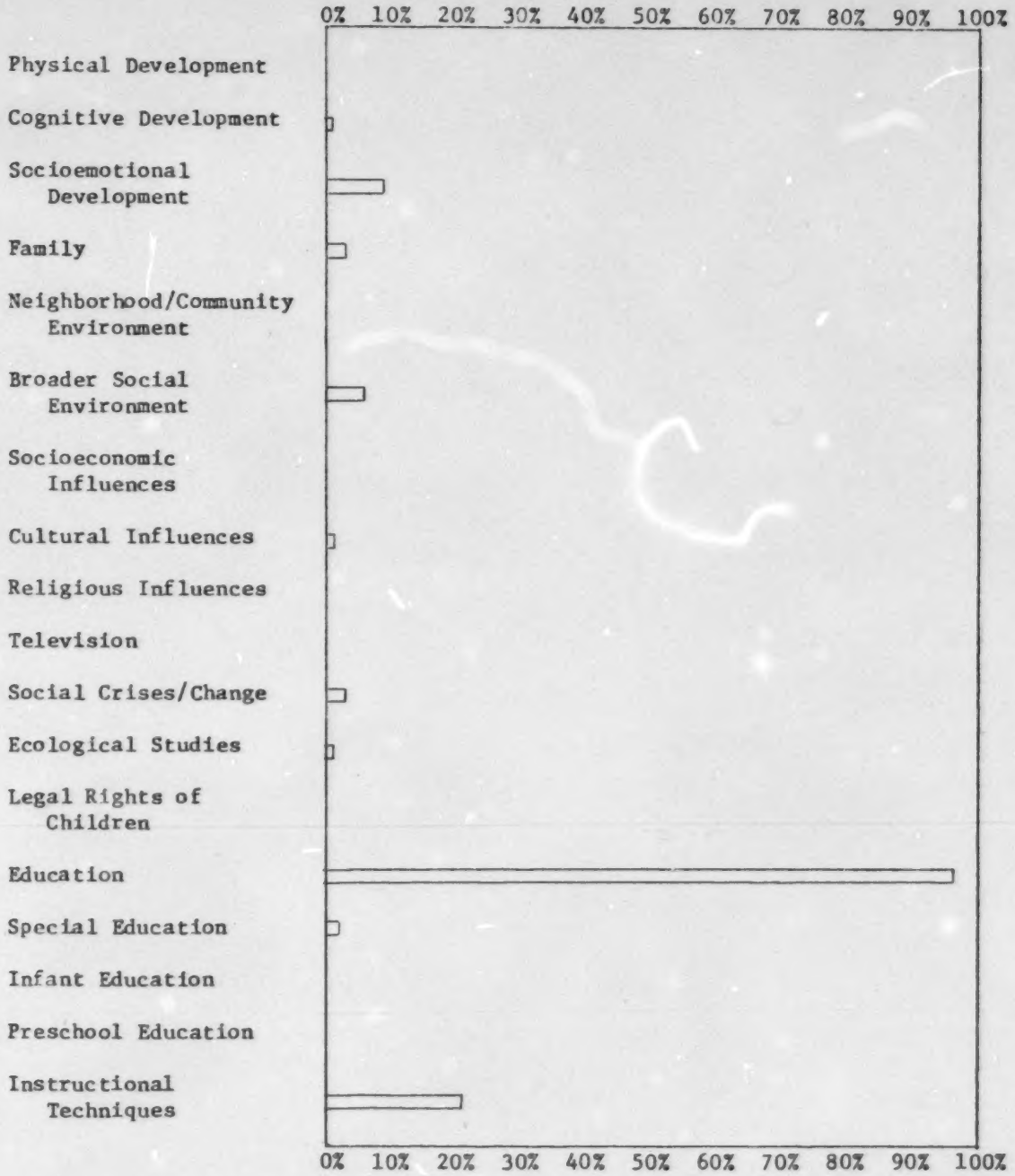
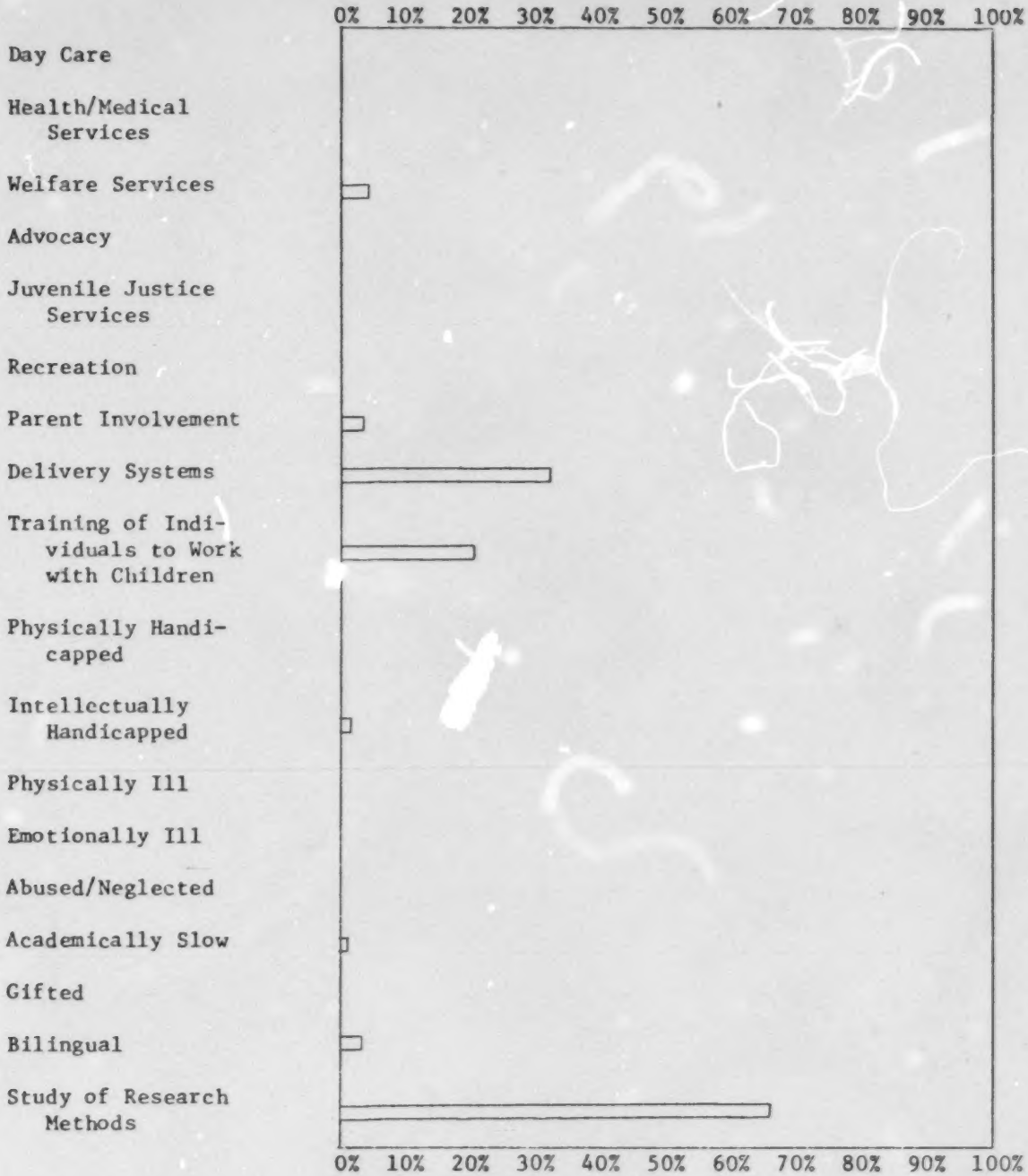


Figure 19 (Continued)

Distribution of BOAE FY '75 Early Childhood Research Projects, by Area of Research (N=62)



Note. Categories are not mutually exclusive.

Office of Career Education
U.S. Office of Education, DHEW

- FY '75 Funding of Early Childhood Research: $7.1 million
- Number of Early Childhood Research Projects Active in FY '75: 58
- Mission and/or Function in Early Childhood Research:

In Section 406 of the Educational Amendments Act of 1974 (PL 93-380), the USOE is called upon to support exemplary models and programs of career education; this is now being accomplished through the Office of Career Education. The Office provides grants for nonprofit making corporations, universities and colleges, and state or local authorities to develop career awareness curriculum for primary school children and career experiences for adolescents.

Description of FY '75 Early Childhood Research Activity

In FY '75 the Office of Career Education supported primarily development (5%) and demonstration projects (89%) designed to offer a specialized curriculum in career education. The diversity of the groups targeted by these projects can be seen in Figure 20, with activity shown for the physically handicapped, intellectually handicapped, academically slow, gifted, and bilingual. Some of the teaching techniques being investigated are volunteer community service (16%), open classroom (12%), and work experience (17%).

An additional goal of this effort is to develop the participants' self-awareness of their own potential and abilities. (Note the categories attitudes, 21 percent, and perception of self, 14 percent, in Table 75.) Many of these projects also include a parent involvement (26%) component.

Figure 20

Distribution of OCE FY '75 Early Childhood Research Projects, by Area of Research (N=58)

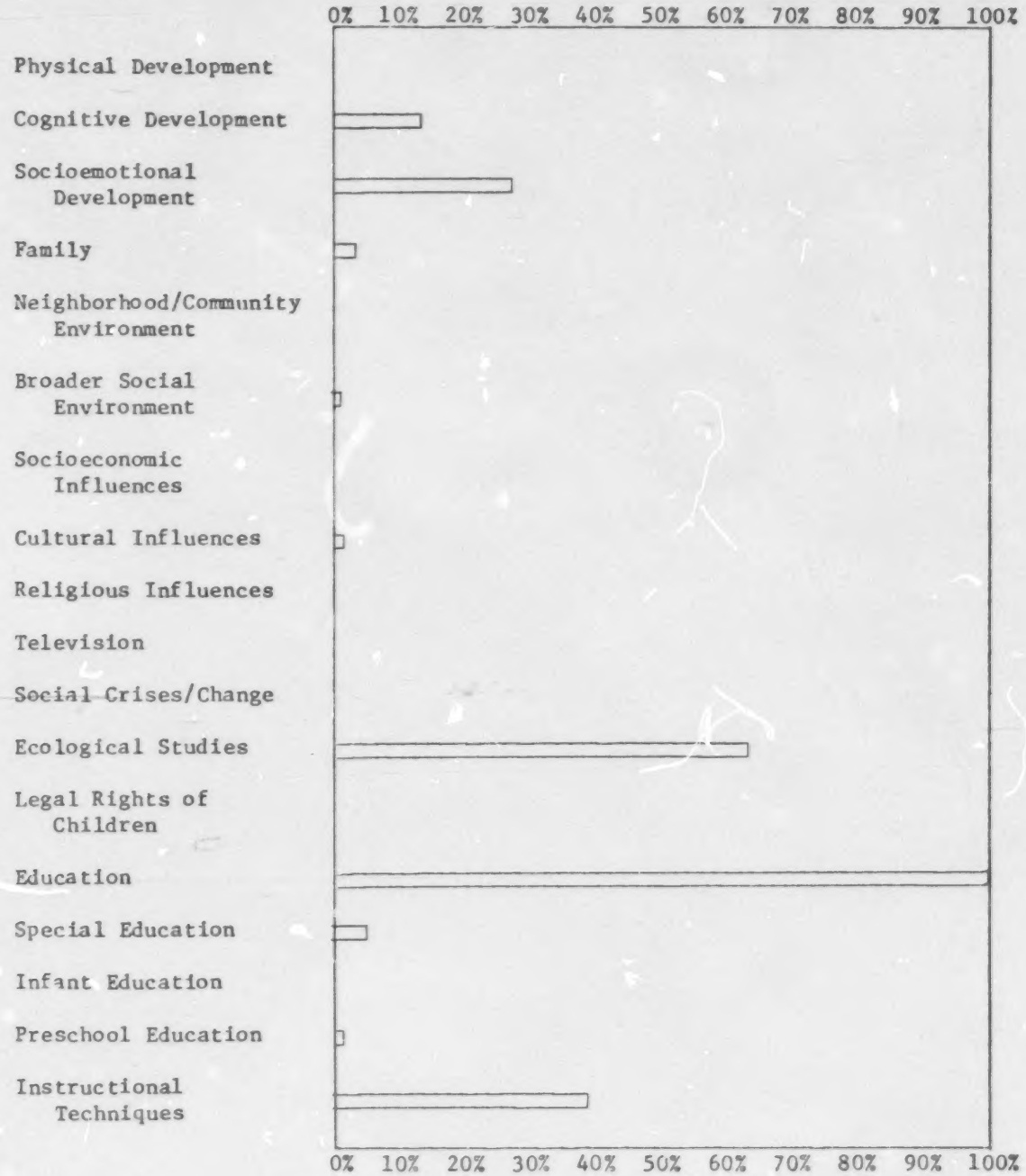
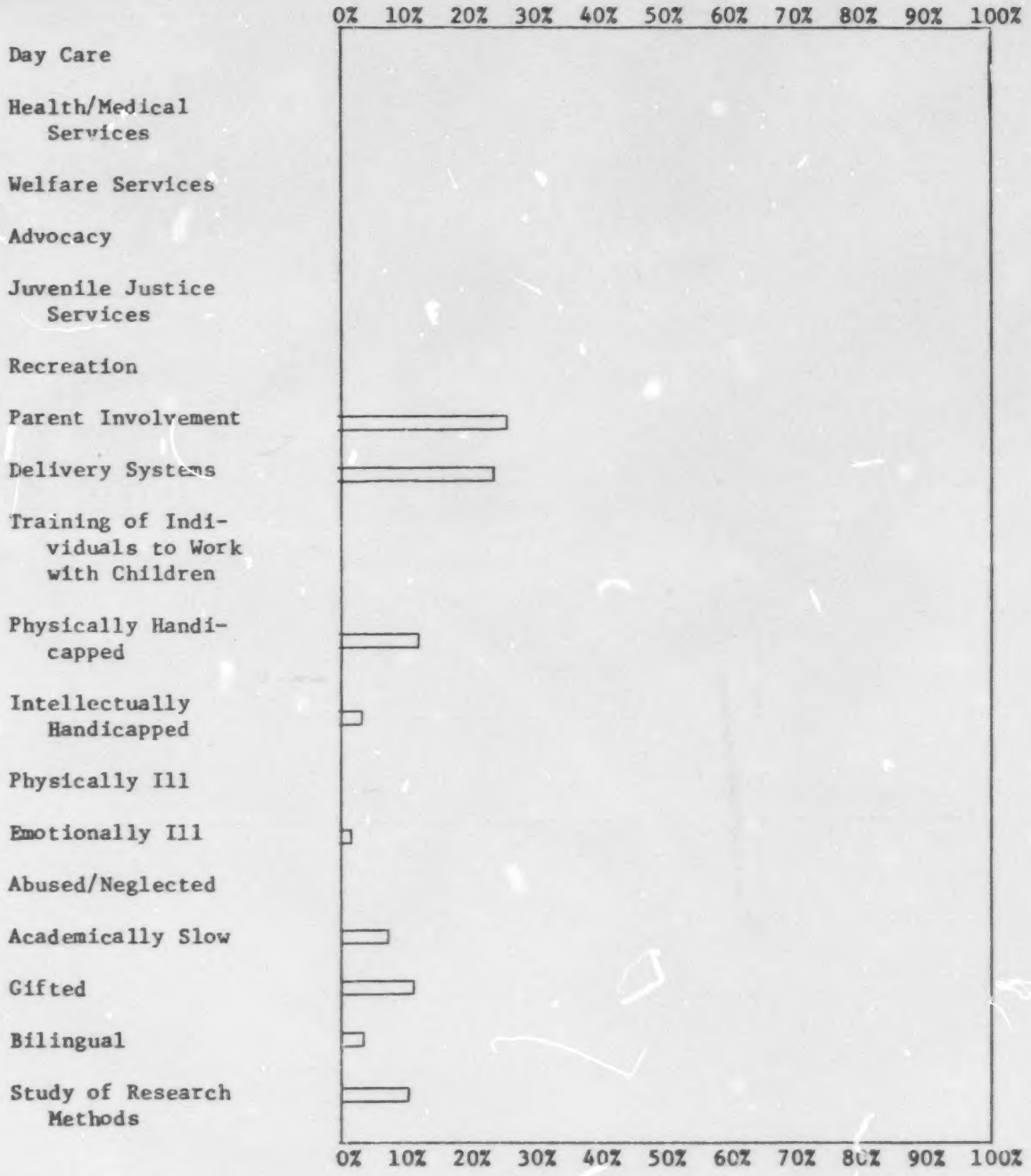


Figure 20 (Continued)

Distribution of OCE FY '75 Early Childhood Research Projects, by Area of Research (N=58)



Note. 1Categories are not mutually exclusive.

Table 75

Breakdown of OCE FY '75 Early Childhood Research Projects on Socioemotional Development

Category	%[a]
Total Research on Socioemotional Development	27.6
Attitudes	20.7
Perception of Self	13.8
Motivation	8.6
Development of Values	6.9
Social Development	4.5
Interpersonal Relationships	1.7

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total OCE FY '75 early childhood research (58 projects).

Table 76

Breakdown of OCE FY '75 Early Childhood Research Projects on Instructional Techniques

Category	%[a]
Total Research on Instructional Techniques	37.9
Work Experience	17.2
Volunteer Community Service	15.5
Open Classroom	12.1
Individualized Instruction	8.6
Television Instruction	6.9
Team Teaching	5.2
Bilingual Instruction	3.5
Non-Graded Instructional Program	1.7

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total OCE FY '75 early childhood research (58 projects).

Table 77

Breakdown of OCE FY '75 Early Childhood Research Projects on Educational Curriculum

Category	%[a]
Total Research on Educational Curriculum	100.0
Career Education	100.0
Vocational/Technical Education	20.7
Arithmetic/Math	6.9
Language Arts	6.9
Social Studies	5.2
Fine Arts	5.2
Reading	3.5
Science	3.5
Cultural Awareness	1.7
Physical Education	1.7

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total OCE FY '75 early childhood research (58 projects).

Office of Planning, Budgeting, and Evaluation
U.S. Office of Education, DHEW

- FY '75 Funding of Early Childhood Research: $8.0 million
- Number of Early Childhood Research Projects Active in FY '75: 18
- Mission and/or Functions in Early Childhood Research:

This office has primary responsibility for the planning, budgeting and evaluation of overall Office of Education programs and provides guidance and coordination for Deputyships in these activities and in establishing objectives. Primary emphasis is placed on conducting national impact evaluations of major Office of Education programs. OPBE prepares analytical studies necessary for the planning of educational policies and specifies the kinds of information to be collected for the evaluation of Federal programs in elementary, secondary, post-secondary, vocational, and special education. OPBE also prepares program memoranda, special studies, and analyses supporting the OE five-year program and financial plan.

Description of FY '75 Early Childhood Research Activity

The bulk of FY '75 OPBE research consists of impact studies and evaluations of major OE programs. These studies examine the overall effect of the programs nationwide, as well as their delivery systems (44%) and cost effectiveness.

An additional OPBE focus is on the development of packages of instructional materials and techniques (Program Information Packages) which resulted from OE supported research.

Policy Research (11%) represents another major area of OPBE interest. Issues relating to educational policy are researched and analyzed in order to formulate future legislation and programs.

Figure 21

Distribution of OPBE FY '75 Early Childhood Research Projects, by Area of Research (N=18)

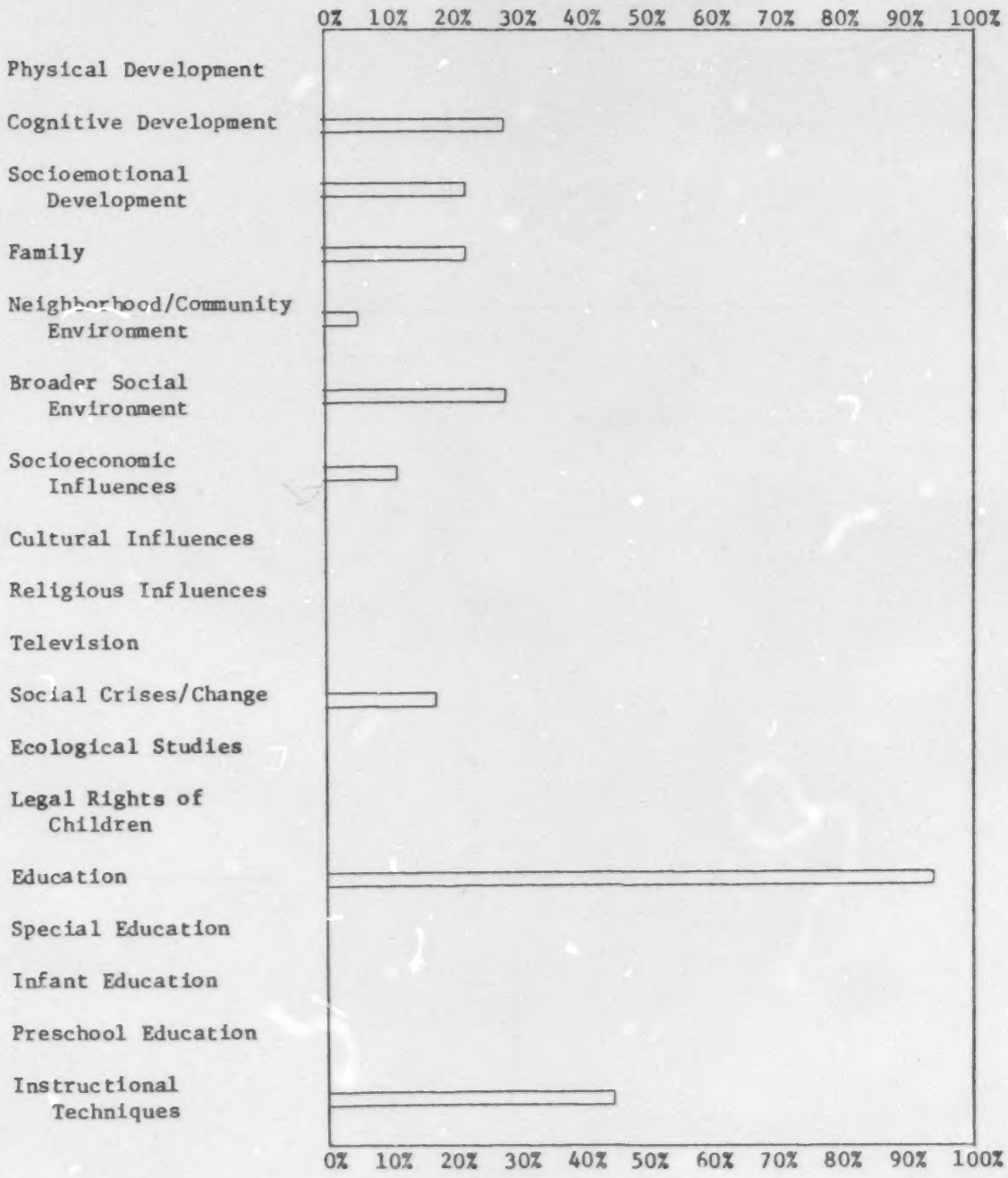
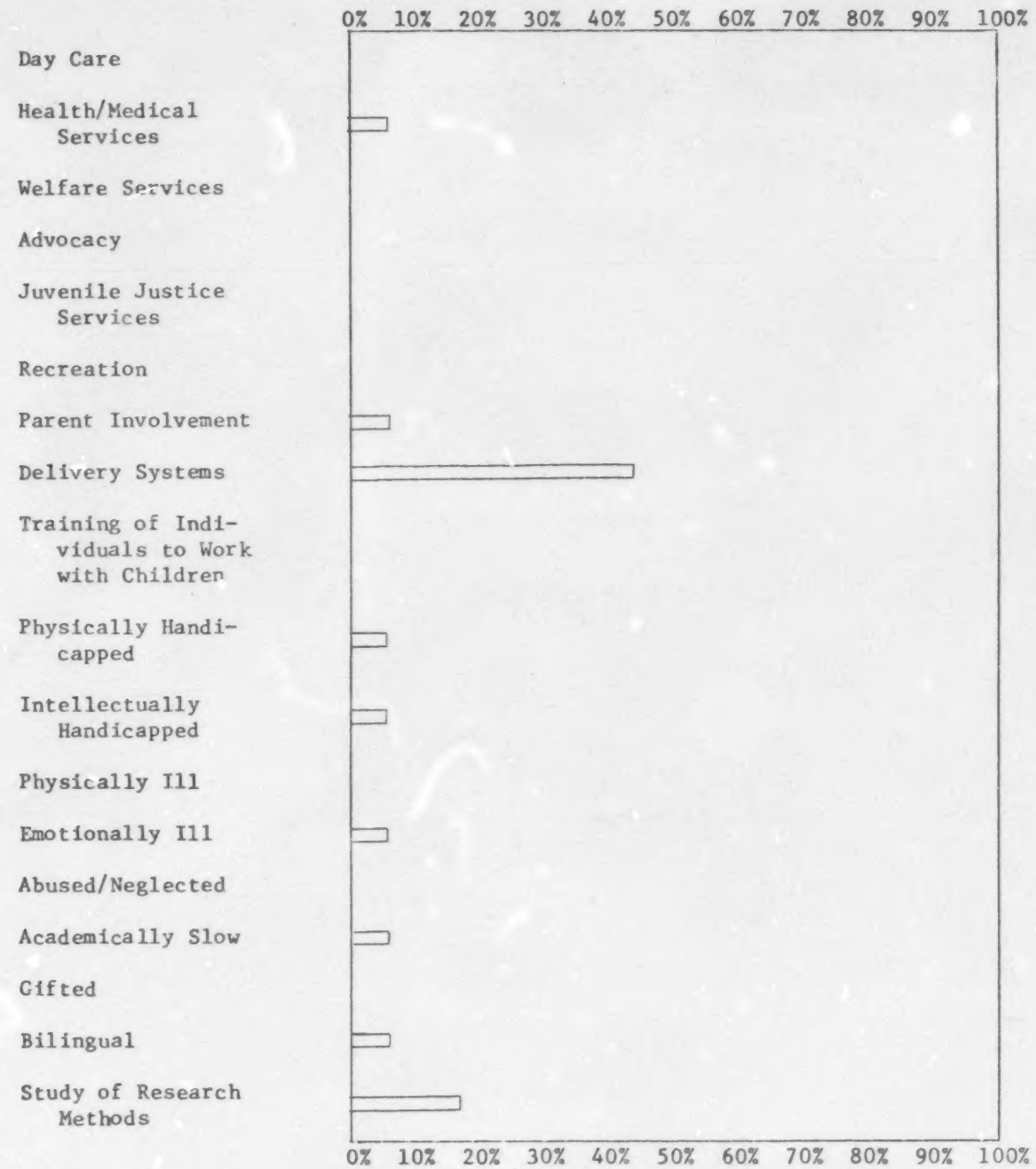


Figure 21 (Continued)

Distribution of OPBE FY '75 Early Childhood Research Projects, by Area of Research (N=18)



Note. Categories are not mutually exclusive.

Table 78

Breakdown of OPBE FY '75 Early Childhood Research Projects on Educational Curriculum

Category	%[a]
Total Research on Educational Curriculum	66.7
Language Arts	22.2
Reading	22.2
Math	11.1
Social Studies	5.6
Fine Arts	5.6
Cultural Awareness	5.6
Science	5.6
Career Education	5.6

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total OPBE FY '75 early childhood research (18 projects).

U.S. Department of Agriculture

- FY '75 Funding of Early Childhood Research: $.4 million
- Number of Early Childhood Research Projects Active in FY '75: 56
- Mission and/or Functions in Early Childhood Research:

The USDA supports research in the Land Grant Institutions which is designed to develop human resource potential. The focus is on the family or household as a functioning unit, and the child as a source in the unit. The work includes studies of issues related to childhood such as nutritional status, early childhood education, the effects of the family, social and physical environment, and cognitive and physical developmental processes. In addition, the USDA Extension Service supports educational programming for children in a variety of areas, e.g., family life, day care, and home economics.

Description of FY '75 Early Childhood Research Activity

As in previous years, USDA FY '75 research touches on the child's development in the context of many aspects of the social environment, which can be seen in Figure 22 in the even distribution of research activity across the developmental processes, the family (38%), the neighborhood/community (34%), and the broader social environment (48%). The latter category includes socioeconomic influences (29%) and cultural influences (20%). Also noteworthy is the amount of research categorized as ecological (16%).

All of the developmental processes--physical, cognitive, and socioemotional--are addressed in a number of projects. Table 80 shows that the research on physical development (29%), is almost entirely concerned with nutrition issues (23%), such as dietary needs and practices as they relate to child development and growth. Research on socioemotional development (39%) concentrates mostly on attitudes (21%) and social behavior (16%).

The breakdown of research on the family indicates that at least one or two projects relate to almost every subcategory. Most of this research, however, concerns parental roles and behavior (14%), the family/society interface (9%), and parent-child relationships (5%).

The majority of USDA research is categorized as basic (61%), and the remainder of the projects are about equally divided among applied (14%), evaluation (11%), and policy research (14%).

USDA also supports work on the research process itself in conjunction with its collaborative research program. Primary emphasis in these programs is on planning and coordinating research designs and instrumentation, particularly with regard to studies on nutrition and nutrition education. Also emphasized are the development and refinement of specific instruments to measure behavioral variables (such as social acceptance or life adjustment).

Table 79

Distribution of USDA FY '75
Early Childhood Projects, By Kinds of Research

Kind of Research	%[a]
Basic	60.7
Applied	14.3
Pilot Study	0.0
Development	7.1
Demonstration and/or Replication	1.8
Evaluation	10.7
Research Support and Utilization Activities	0.0
Policy Research	14.3

Note. Categories are mutually exclusive, except that the applied research category subsumes the three subcategories indented below it (thus only the figures shown for the five general categories should sum to 100%).

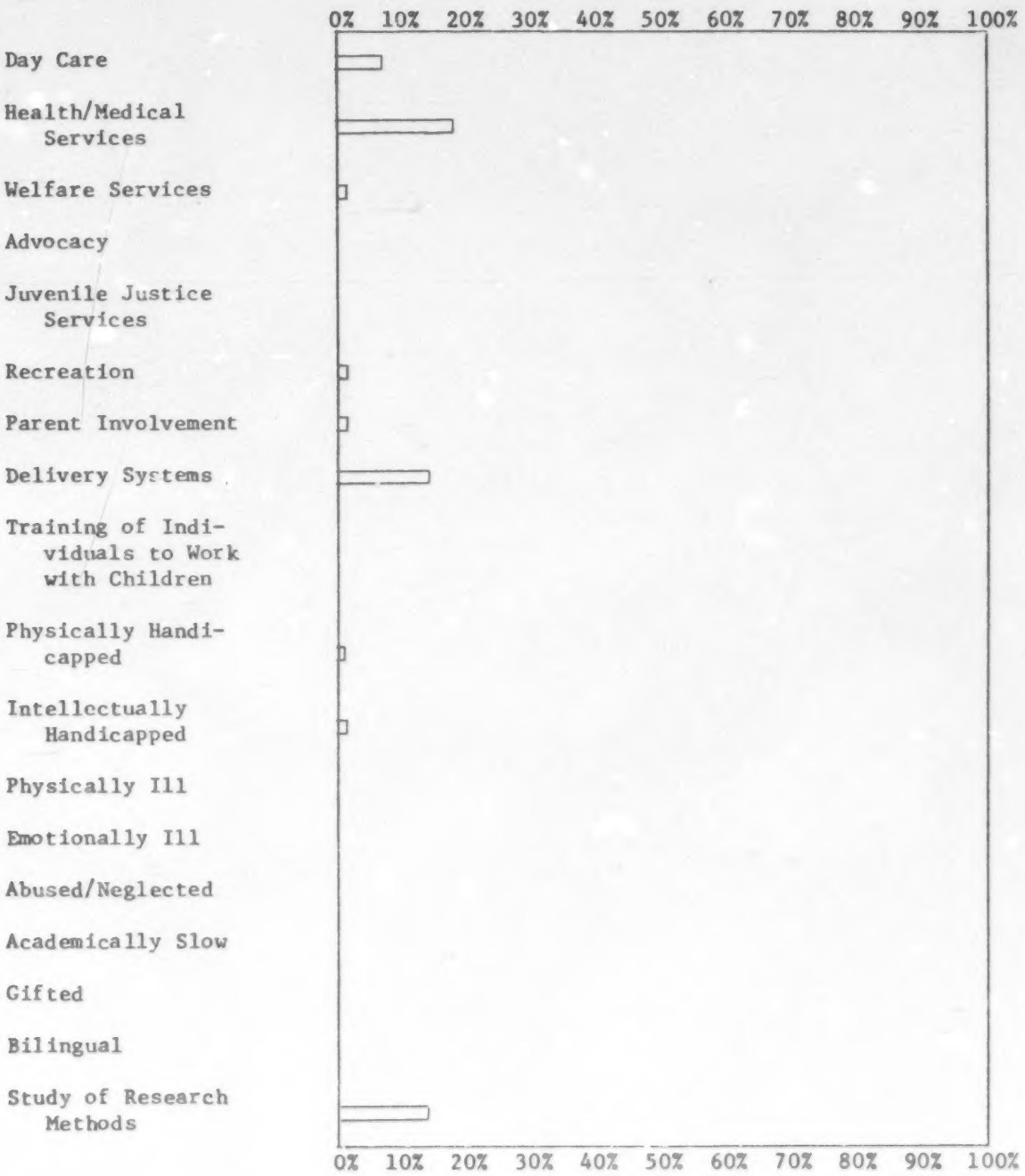
[a]Percentage of total USDA FY '75 early childhood research (56 projects).

Figure 22

Distribution of USDA FY '75 Early Childhood Research Projects, by Area of Research (N=56)

Figure 22 (Continued)

Distribution of USDA FY '75 Early Childhood Research Projects, by Area of Research (N=56)



Note. Categories are not mutually exclusive.

Table 80

Breakdown of USDA FY '75 Early Childhood Research Projects on Physical, Cognitive and Socioemotional Development

Category	%[a]
Total Research on Physical Development	28.6
Nutrition	23.2
Physical Characteristics	14.3
Pregnancy and Childbirth	7.1
Physical Disease	3.6
Body Growth	3.6
Motor Development	1.8
Total Research on Cognitive Development	21.4
Cognitive Achievement	10.7
Problem-Solving	5.4
Concept Formation	.8
Memory	1.8
Language Development	1.8
Intellectual Handicaps	1.8
Total Research on Socioemotional Development	39.3
Attitudes	21.4
Social Behavior	16.1
Interpersonal Relationships	5.4
Motivation	3.6
Personality	3.6
Development of Values/Morals	1.8
Emotional Development	1.8

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total USDA FY '75 early childhood research (56 projects).

Table 81

Breakdown of USDA FY '75 Early Childhood Research Projects on the Family

Category	%[a]
Total Research on Family	37.5
Parental Roles and Behavior	14.3
Family/Society Interface	8.9
Parent-Child Relationships	5.4
Ecology of the Home	3.6
Child Rearing	3.6
Family Structure	1.8
Sibling Relationships	1.8
Family Health	1.8

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a]Percentage of total USDA FY '75 early childhood research (56 projects).

National Institute for Juvenile Justice and Delinquency Prevention
Office of Juvenile Justice and Delinquency Prevention
Law Enforcement Assistance Administration
U.S. Department of Justice

- FY '75 Funding of Early Childhood Research: $3.0 million
- Number of Early Childhood Research Projects Active in FY '75: 13
- Mission and/or Functions in Early Childhood Research:

The National Institute for Juvenile Justice has five major functions: (1) to conduct, encourage, and coordinate research relating to any aspect of juvenile delinquency; (2) to conduct, encourage, and coordinate evaluation relating to any aspect of juvenile delinquency; (3) to collect, prepare, and disseminate useful data regarding the treatment and control of juvenile offenders; (4) to provide training for personnel connected with the treatment and control of juvenile delinquency; and (5) to develop standards for the administration of juvenile justice at the Federal, state, and local levels.

The Institute's research and evaluation efforts are coordinated with and support the discretionary programs of the Office of Juvenile Justice. Some of the major programs include the following: the deinstitutionalization of status offenders (juveniles who have committed acts that would not be criminal for adults); diversion of offenders from the juvenile justice system; reduction of serious crime committed by juveniles; and juvenile delinquency prevention. The last category, concerning prevention, is of primary relevance to early childhood research.

Description of FY '75 Early Childhood Research Activity

The LEAA research on children focuses almost entirely on the delivery of juvenile justice services (92%) aimed at the prevention of juvenile delinquency. Additional areas of research related to the sociology of delinquency are the broader social environment (92%), social crises and changes (85%), and the legal rights of children (31%).

Table 82

Distribution of LEAA FY '75
Early Childhood Projects, By Kind of Research

Kind of Research	%[a]
Basic	0.0
Applied	61.5
Pilot Study	7.7
Development	15.4
Demonstration and/or Replication	0.0
Evaluation	0.0
Research Support and Utilization Activities	0.0
Policy Research	38.5

Note. Categories are mutually exclusive, except that the applied research category subsumes the three subcategories indented below it (thus only the figures shown for the five general categories should sum to 100%).

[a]Percentage of total LEAA FY '75 early childhood research (13 projects).

Figure 23

Distribution of LEAA FY '75 Early Childhood Research Projects, by Area of Research (N=13)

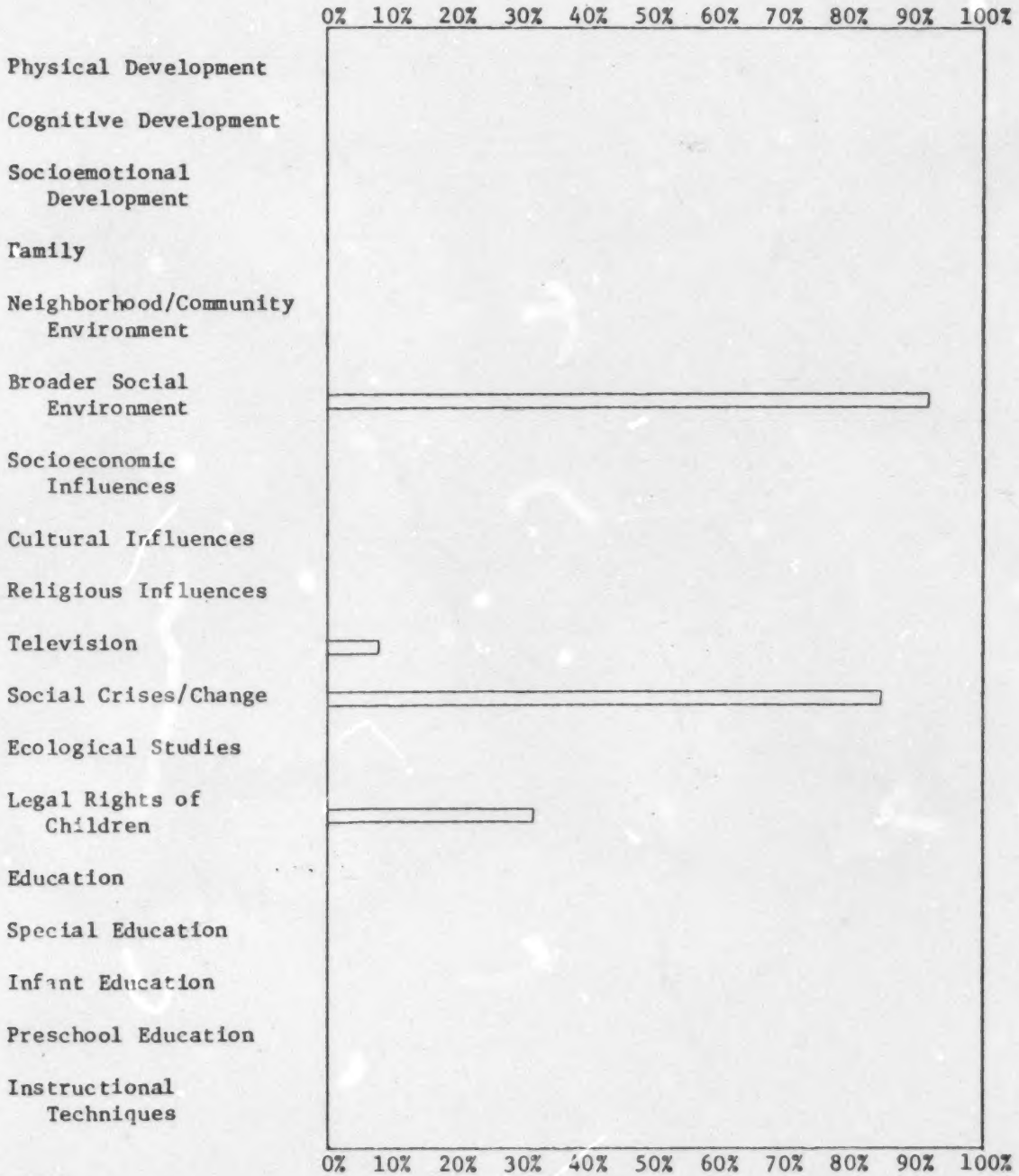
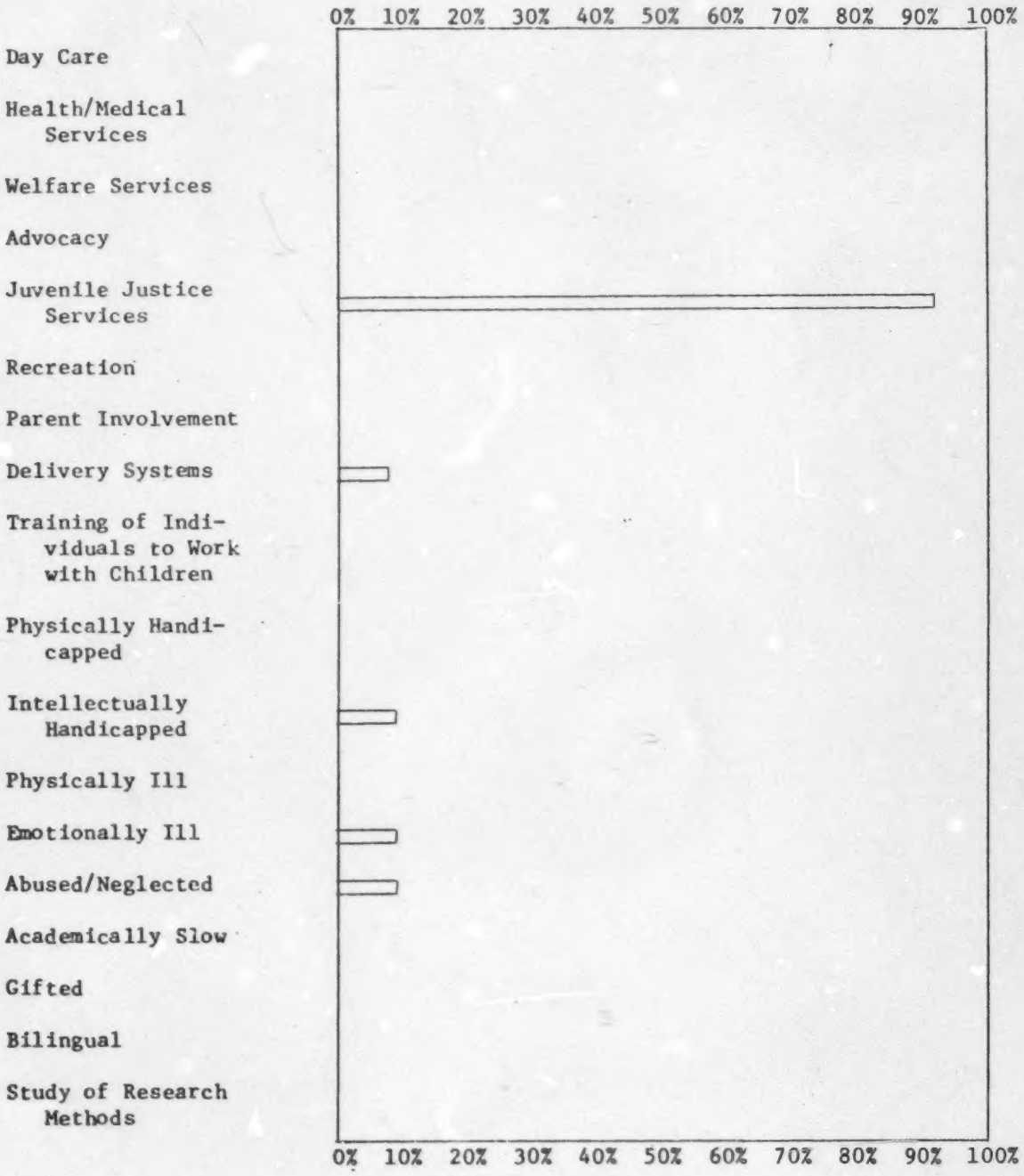


Figure 23 (Continued)

Distribution of LEAA FY '75 Early Childhood Research Projects, by Area of Research (N=13)



Note: Categories are not mutually exclusive.

APPENDIX A

AGENCY PLANS FOR EARLY CHILDHOOD RESEARCH IN FY '75

The data shown in this appendix were derived from questionnaires distributed to individuals within the member agencies. For each area, the agencies who indicated a high, medium or low level of interest are listed in the appropriate columns. A rating of high indicates that an agency will give a relatively great deal of priority to research activity in that area. Medium is designated when the research area is of substantial but secondary interest to the agency. Low denotes areas of research which might be supported but on a very low priority basis. A plus or minus shown in parentheses following an agency acronym indicates that the agency's FY '76 level of interest in that area has increased or decreased significantly from FY '75.

Agency Plans for Early Childhood Research in FY '76

Specific Interests By General Area	Level of Agency Interest FY '76		
	HIGH	MEDIUM	LOW
THE DEVELOPMENTAL PROCESSES			
Cognitive development	NIMH,NIE	OCD,BEH	
Perception/attention	NICHD,NINCDS BCHS,NIE(+), NIMH	OCD,BEH	USDA
Thought processes	NICHD,NINCDS, NIE(+),NIMH	OCD,USDA(+), BEH	
Learning	NICHD,NINCDS, BEH, NIMH, NIE(+)	OCD,BCHS, USDA(+)	
Language	NICHD,NIE(+), NINCDS, NIMH	OCD,BCHS, BEH	
Intellectual handicaps	NICHD,NINCDS, BEH,NIMH(+)	OCD	BCHS,NIE, USDA
Socioemotional development	NIE,NIMH	OCD	
Self-concept (e.g., locus of control, sexual identity)*	NIE,NIMH		NICHD
Interpersonal relationships*	NIE,USDA(+), NIMH	BEH,NICHD	
Emotional development (e.g., anxiety, alienation)	NIE(+),BEH, NIMH	OCD,USDA	NICHD
Attitudes	NIE(+),NIMH	OCD,NICHD, USDA, BEH	
Moral development*		NIE,NIMH	NICHD
Physical development			NIMH
Body growth	NICHD,NINCDS, BCHS		OCD,USDA,NIMH
Sensorimotor development	NINCDS,BCHS	OCD,NICHD,BEH	NIE,USDA, NIMH(-)
Physical disease and illness	NINCDS,BCHS	NICHD	USDA,NIMH(-)
Fetal and neonatal health/ nutrition	NICHD,NINCDS, BCHS,NIMH(+)		USDA,NIE(+)
Physical handicaps	NINCDS,BCHS	OCD,NICHD,BEH	NIE(+),NIMH

*Areas that were not included in last year's questionnaire.

Agency Plans for Early Childhood Research in FY '76 (Continued)

Specific Interests By General Area	Level of Agency Interest FY '76		
	HIGH	MEDIUM	LOW
THE CHILD'S ENVIRONMENT			
The family	NIMH	NIE(+)	
Structure of the family	OCD,NIMH	NICHD	USDA,NINCDS, NIE(+)
Family functioning (including intrafamily relationships)	OCD,USDA, NIMH	NICHD	NIE(+)
Family health		OCD,NINCDS, BCHS	NICHD,USDA, NIMH
Family's interface with society	OCD,USDA, NIMH	NIE(+)	NICHD
Ecology of the home (e.g., child's interaction with home surroundings)	USDA(+),NIMH	OCD,NIE(+)	NICHD
Parenting skills (parent education)	OCD,USDA(+) BEH,NIMH	NICHD,BCHS, NIE(+)	
Involvement of parents in research/development	NIMH	OCD,BCHS	USDA,NIE(+)
The neighborhood/community environment	NIMH(+)	NIE(+)	
Social environment (e.g., interrelationships among people, institutions, services)	USDA,NIE(+)	OCD,BEH, NIMH(+)	NICHD
Peers	NIMH	NIE	NICHD
Physical environment (e.g., facilities, housing)		BCHS,NIE(+), USDA(-)	NICHD,NIMH, NINCDS
Social/cultural/religious influences	NIMH	OCD,USDA, NIE(+)	NICHD,NINCDS
Mass-media and TV		OCD,NIE(+)	NICHD,USDA, NIMH
Social changes and crises (e.g., unemployment, geographic mobility)	NICHD	NIMH(+)	OCD,USDA, NIE(+)
Legal rights and responsibilities of children	NIMH(+)	OCD,NIE(+), BEH	USDA,NICHD

Agency Plans for Early Childhood Research in FY '76 (Continued)

Specific Interests By General Area	Level of Agency Interest FY '76		
	HIGH	MEDIUM	LOW
THE CHILD'S ENVIRONMENT (Cont.)			
Day care		NIMH	
Impact on the child		OCD,BCHS,NIMH	NICHD,USDA, DOL
Impact on the family		OCD,NIMH	NICHD,USDA
Delivery of day care services	OCD	BCHS	DOL,USDA(-), NIMH
Alternatives to center-based day care	NIMH	OCD	USDA,DOL
Education			
Infant education/stimulation programs	NIMH	OCD,BCHS, NICHD,BEH	NIE
Preschool education	BEH,NIMH	OCD,USDA, NICHD	NIE
Special education	BEH,NIMH	OCD,NICHD	NIE
Instructional techniques*	NIE,BEH	NIMH	NICHD
Curricula*	NIE,BEH	OCD,NIMH	USDA(+)
Bilingual instruction	NIE(+)	OCE,BEH, NIMH	
Teaching innovations (e.g., open classroom)	NIE(+),NIMH, BEH	OCD	NICHD,USDA
Equipment/technological innovations (e.g., TV)*	NIE,BEH		NIMH
Basic skills*	NIE	BEH	NIMH
Reading	NIE	OCD,NICHD, NINCDS(+), BEH,NIMH	
Desegregation*	NIE	NIMH	
Voucher plans*	NIE		NIMH
Career awareness*	NIE,BEH		NIMH
Health care and services	BCHS,NIMH		
Mental health	NIMH	BEH	OCD,BCHS,USDA
Physical health	BCHS	NINCDS,USDA	OCD,NICHD, NIMH

Agency Plans for Early Childhood Research in FY '76 (Continued)

Specific Interests By General Area	Level of Agency Interest FY '76		
	HIGH	MEDIUM	LOW
THE CHILD'S ENVIRONMENT (Cont.)			
Health care and services (Cont.)			
Child abuse (e.g., diagnosis, treatment)*	OCD,BCHS, NIMH	BEH	NICHD
Nutrition	NICHD,BCHS, NIMH	USDA(+)	OCD,NIE
Handicaps	NICHD,BCHS, NINCDS	BEH,NIMH	OCD,USDA
Pre-and post-natal care	NICHD,BCHS, NIMH		OCD,USDA
Family planning	NICHD	BCHS	OCD,NIMH
Welfare services		NIMH	
Foster care and adoptive services		OCD	BCHS,NIMH
Child abuse (e.g., prevention, intervention, family support)	OCD,BCHS,NIMH	BEH	
Emergency services		OCD,BCHS	NIMH
Advocacy	NIMH	OCD	
Global approach	NIMH		
Whole child/interrelations among developmental processes	NICHD,OCD, NINCDS, NIMH	USDA(+),BEH	NIE(+)
Ecological studies	OCD,NIMH	USDA(+), NICHD	
Combined and/or comparative effects of social programs	OCD,NIMH	NIE(+),BEH	USDA(-)
RESEARCH TARGET GROUP			
Prenatal	NICHD,BCHS, NINCDS,NIMH		NIE,USDA
Infancy	NICHD,BCHS, NINCDS,NIMH	OCD,BEH	NIE,USDA
One to three years of age	OCD,NICHD, NINCDS,BCHS, BEH,NIMH		NIE,USDA

Agency Plans for Early Childhood Research in FY '76 (Continued)

Specific Interests By General Area	Level of Agency Interest FY '76		
	HIGH	MEDIUM	LOW
RESEARCH TARGET GROUP (Cont.)			
Preschool age	OCD,NICHD, NINCDS,BCHS, USDA(+),BEH, NIMH		NIE
Kindergarten and elementary	NICHD,BEH, NINCDS,NIE, NIMH	OCD,BCHS,USDA	
Minority ethnic groups	OCD,NINCDS, NIMH,NIE(+)		NICHD,BCHS, USDA
Disadvantaged	OCD,NINCDS, BCHS,NIMH NIE(+)	NICHD	USDA
Gifted	NINCDS	OCD,BEH	NICHD,NIE, USDA,NIMH
Average ability	NICHD,NIE, NINCDS	OCD	USDA,NIMH
Physically handicapped	NINCDS,BCHS, BEH	OCD	NICHD,NIE, NIMH
Intellectually handicapped	OCD,NICHD, NINCDS,BCHS, BEH,NIMH		NIE,USDA
Bilingual	OCD,NINCDS, NIE(+)	BEH,NIMH	NICHD,USDA
Learning disabled	OCD,NINCDS, BCHS,BEH,NIMH	NICHD	NIE
RESEARCH ON METHODOLOGY			
Tests and measures development	OCD,BEH, NINCDS(+), NIMH	BCHS,NIE,USDA	NICHD
Program evaluation methods	OCD,BCHS,NIE	NINCDS(+), USDA,BEH,NIMH	NICHD
Observational methods	NIMH	OCD,NINCDS, BCHS,BEH	NICHD,NIE, USDA
Interview, survey, questionnaire methods	NIMH	OCD,NINCDS, BEH	NICHD,BCHS, NIE,USDA

Agency Plans for Early Childhood Research in FY '76 (Continued)

Specific Interests By General Area	Level of Agency Interest FY '76		
	HIGH	MEDIUM	LOW
RESEARCH ON METHODOLOGY (Cont.)			
Research design	NIE(+),NIMH	OCD,NICHD, NINCDS,BCHS, USDA,BEH	
Statistical techniques	BCHS,NIE(+), NIMH	OCD,NICHD, NINCDS,BEH	USDA(-)
Methodology of longitudinal research	NIMH	OCD,NINCDS, BEH,BCHS,NIE, USDA	NICHD
Methods to improve comparability	OCD,NIMH	NICHD,NINCDS, NIE,BEH	BCHS,USDA
STUDY OF RESEARCH PLANNING AND DISSEMINATION			
Planning interagency research		OCD,NINCDS, BEH,NIE(+), NIMH	NICHD,BCHS, USDA
Planning interdisciplinary research	OCD,NINCDS, NIE(+)	NICHD,BEH, BCHS,USDA, NIMH	
Conferences/studies relating to Federal research needs and goals	NICHD,NINCDS, NIE(+)	OCD,BCHS,USDA BEH,NIMH	
State-of-the-art papers	OCD	NICHD,NINCDS, BCHS,NIE,USDA BEH,NIMH	
Studies of dissemination/ utilization of findings	OCD,BCHS, NIE,BEH	NINCDS, USDA(-),NIMH	NICHD
Development of information collection, processing and analysis systems	OCD,NINCDS, BCHS,BEH,NIMH	NIE(+), USDA(-)	NICHD

APPENDIX B

EARLY CHILDHOOD PANEL MEMBERSHIP LIST

THE INTERAGENCY PANEL ON EARLY CHILDHOOD RESEARCH AND DEVELOPMENT

MEMBERSHIP LIST*

AGRICULTURE, U.S. DEPARTMENT OF:

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Mr. Hal Wallach, Program Manager, Center for Census Use Studies, Room 3540, Building 3, Suitland, Maryland 20233 — 763-5244

Ms. Mary Westcott, Center for Census Use Studies, Room 3540, Building 3, Suitland, Maryland 20233 — 763-2589

HEALTH, EDUCATION AND WELFARE, U.S. DEPARTMENT OF:

Assistant Secretary for Planning and Evaluation (ASPE)

Dr. Carol McHale, Division of Human Development and Social Services, Room 4550, HEW North Building, 330 Independence Avenue, S.W., Washington, D.C. 20201 — 245-6172

Bureau of Community Health Services (BCHS)

Ms. Geraldine J. Norris, Deputy Associate for Research and Training, Room 12-05, Parklawn Building, 5600 Fishers Lane, Rockville, Maryland 20852 — 443-6600

Ms. Gloria Wackernah, Clinical Services Division, Health Services Improvement Branch, Room 12A-08, Parklawn Building, 5600 Fishers Lane, Rockville, Maryland 20852 — 443-2190

National Institute of Child Health and Human Development (NICHD)

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*Persons listed here were acting as representatives of their agencies on the Interagency Panel on Early Childhood Research and Development as of December 1975. This list is subject to change.

HEALTH, EDUCATION, AND WELFARE, U.S. DEPARTMENT OF:

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National Institute of Education (NIE)

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Dr. Lois-ellin Datta, Education and Work Group, Room 600, 1200 Nineteenth Street, N.W., Washington, D.C. 20208 — 254-5310

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Dr. Stephen Hersh, Assistant Director for Children and Youth, Room 15C-04, 5600 Fishers Lane, Rockville, Maryland 20852 — 443-4995

Dr. Teri Levitin, Executive Secretary, Applied Research Juvenile Problems Committee, 5600 Fishers Lane, Rockville, Maryland — 443-3566

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Dr. Edith H. Grotberg, Room 5044, Donohoe Building, 400 Sixth Street, S.W., Washington, D.C. 20202 — 755-7750

Dr. Esther Kresh, Division of Research and Evaluation, Room 5044, Donohoe Building, 400 Sixth Street, S.W., Washington, D.C. 20202 — 755-7750

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Dr. Joan E. Duval, Women's Program Staff, Room 3121, FOB #6, 400 Maryland Avenue, S.W., Washington, D.C. 20202 — 245-2181

Mr. Lawrence D. Haber, Acting Division Director, Division of Survey Operations, National Center for Education Statistics, Room 3073, FOB #6, 400 Maryland Avenue, S.W., Washington, D.C. 20202 — 245-3399

Dr. James L. Hamilton, Bureau of Education for the Handicapped (BEH), Room 2012, ROB #3, 400 Maryland Avenue, S.W., Washington, D.C. 20202 — 245-9836

HEALTH, EDUCATION, AND WELFARE, U.S. DEPARTMENT OF:

Office of Education (OE)

Dr. Robert Weatherford, Special Assistant to the Commissioner of Education, Room 4177B, FOB #6, 400 Maryland Avenue, S.W., Washington, D.C. 20202 — 245-9251

Office of Human Development (OHD)

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Ms. Jane Lampman, Director of Planning and Evaluation, Room 5700, HEW North Building, 330 Independence Avenue, S.W., Washington, D.C. 20201 — 245-7027

Mr. William Renahan, Research and Evaluation, Room 5700, HEW North Building, 330 Independence Avenue, S.W., Washington, D.C. 20201 — 245-3176

Social and Rehabilitation Services (SRS)

Ms. Madeline G. Dowling, Social Services Research and Demonstration Division, Room 5431, Mary E. Switzer Building, Washington, D.C. 20201 — 245-0882

Dr. Abraham Levine, Office of Research and Demonstrations, Room 5423, HEW South Building, 330 C Street, S.W., Washington, D.C. 20201 — 245-0526

HOUSING AND URBAN DEVELOPMENT, U.S. DEPARTMENT OF:

Ms. Deborah Greenstein, Office of Policy Development and Research, Room 8142, 451 Seventh Street, S.W., Washington, D.C. 20410 — 755-6450

LABOR, U.S. DEPARTMENT OF:

Mr. Thomas M. Bruening, Division Chief, Division of Experimental Operations and Research, Room 9010, Patrick Henry Building, 601 D Street, N.W., Washington, D.C. 20213 — 376-6521

OFFICE OF MANAGEMENT AND BUDGET (OMB):

Mr. Allen Jackson, Room 7017, New Executive Office Building, 17th and Pennsylvania Avenue, N.W., Washington, D.C. 20503 — 395-4532

APPENDIX C

GUIDELINES AND PROCEDURES FOR USE OF INTERAGENCY PANEL INFORMATION SYSTEM

GUIDELINES AND PROCEDURES FOR USE OF INTERAGENCY PANEL INFORMATION SYSTEM

The Interagency Panel on Early Childhood Research and Development in 1971 established a computerized data system in order to facilitate the sharing of information and to encourage the coordination of planning among the member agencies. Prior to the establishment of this data system, no organization collected and disseminated information about ongoing research from all of the Panel member agencies. In 1973 the Early Childhood Panel was joined by the Interagency Panel for Research and Development on Adolescence and a joint data bank was formed. The data bank, now in its fifth year of existence, incorporates a unique and ever expanding data file about early childhood and adolescence research grants and contracts funded by member agencies.

Since 1971, the Social Research Group staff has annually developed a more comprehensive book of descriptors with corresponding codes and coding institutions. This book is used to classify each project according to a given set of qualifying characteristics. In the early years of the Panel, agency representatives classified their own agency projects and that information became the basis of the computerized data bank. Today, however, the collection, coding and computerizing effort has grown considerably. The Panel staff now collects and codes the projects from a growing number of member agencies. The computerized data system contains over 3,500 projects on early childhood and adolescence classified by 650 descriptors and 229 test codes as compared with a 1971 data bank of 750 projects classified by 150 descriptors. This expanded collection and classification effort allows for more comprehensive, yet detailed, research analyses.

Data System Operation

Projects are characterized by a set of four digit codes which correspond to a set of descriptors. The coding system is broad enough in scope to include detailed information about a project's funding and duration, sample characteristics, instrumentation, purpose, methodology and data collection techniques, and areas of research focus.

Each project within the data system is assigned a five digit computer identification number. The first two digits represent the agency code number and the last three digits identify the particular project in the agency. The data base for early childhood research is drawn from the following agencies:

01 Bureau of Community Health Services (BCHS)
02 National Institute of Mental Health (NIMH)
03 National Institute of Child Health and Human Development (NICHD)
04 OE--Assistant Secretary for Planning and Evaluation (ASPE)
05 Office of Child Development (OCD)
06 Rehabilitation Service Administration (RSA)
07 Social and Rehabilitation Service (SRS)
08 OE--Bureau of Education for the Handicapped (BEH)
09 OE--Follow Through (Division of Follow-Through)
15 National Institute of Neurological and Communicative Disorders and Stroke (NINCDS)
16 OE--Office of Bilingual Education--Title VII
17 OE--Right to Read
23 OE--Division of Bilingual Education--Title VII
24 United States Department of Agriculture (USDA)
25 OE--Bureau of Occupational and Adult Education (BOAE)
26 OE--Office of Planning, Budgeting, and Evaluation (OPBE)
27 OE--Division of Educational Technology
29 Department of Labor (DOL)
30 National Institute of Education (NIE)
31 Office of Youth Development (OYD)
32 ACTION
33 OE--Office of Environmental Education (OEE)
35 National Institute of Drug Abuse (NIDA)
36 OE--Office of Indian Education (OIE)
37 National Institute of Alcohol Abuse and Alcoholism (NIAAA)
38 Law Enforcement Assistance Administration (LEAA)
39 OE--Office of Career Education (OCE)

After the projects have been coded, the numeric codes are keypunched, verified, and programmed onto a computer tape and a disk data set.

Essentially, the data system is composed of three data files: (1) Literal file. This file contains the name of the funding agency, the project identification number and project title. (2) Numeric file. This file contains coded descriptor sets which characterize the project under study. Each project within the system is defined by a separate set of characteristics, all of which are drawn from the classification scheme. This file also contains the FY '75 funding. If no funds were expended in FY '75 or if project funding was not available, the project is marked as having received "0" funds. Since

continued projects maintain the same identification number from year to year, it is possible to obtain the previous year's funding on a given project. (3) Instrumentation file. This file contains a coded list of standardized instruments which were utilized in each study. "Homemade" and other uncommon tests and measures are coded under a general set of descriptors, such as physical test, questionnaire, interview and other items.

These three files, although input as separate data sets, are eventually merged into one data system master file. In addition, the principal investigators of the projects in the data system are listed alphabetically, along with the identification numbers of their projects.

Requests may be made for information retrieval from all of the above mentioned files. Also, a brief abstract is available for each research project contained in the data system. This abstract usually contains the purpose, objectives, methodology, and when available, the sample characteristics and the instrumentation used in the study. Given the assumption that the information available is intended to function as a guide to direct the requestor toward the principal investigator and/or the sponsoring agency for further information, the abstracts are kept as short and concise as possible.

How to Make a Request

A request for information about the data system projects may be made in writing or by telephone (followed by a written request) to:

Social Research Group, G.W.U.
Attn: Sharon Mangus
2401 Virginia Avenue, N.W.
Washington, D.C. 20037

Telephone: (202) 331-8706

In general, the more specific the request the better the response to that request. Information requests can be more accurately answered if code numbers are included in the request. Descriptors and corresponding code numbers are contained in the Social Research Group classification scheme (Harrell, 1975).

A typical example of a request might be:

> Send titles, funding and abstracts of all agencies' projects dealing with cognitive development (6040) in urban (2050) black (2034) children ages 3 to 5 (2007, 2008, 2009), in a day care setting (6326).

The computer program for information retrieval is flexible enough to meet a wide variety of needs of the requestor. Program capabilities allow for the printing of these types of information: (1) identification number; (2) project title; (3) funding; (4) number of qualifying projects, and amount of funding within and across agencies. Additional statistical information is available on request.

Policy for Information Release

The general policy of both Panels is that whatever information is in the data bank should be made available to whoever makes a request. In recent years an increased number of requests for information has come from interested agencies and from persons outside the Federal Government, and there has been significantly more dissemination of information from the data system this year than in any previous year. Because of this increase, requests from non-Federal government sources must be fulfilled on a cost-reimbursement basis. Numerous requests have been answered for Panel member agencies, other Federal agencies, Congressional committees, universities, foundations, institutes, and individual researchers.

In order to keep the Panel members informed of all requests that are received, the Social Research Group keeps a log of the following information: (1) name of requestor; (2) nature of request; (3) information supplied in terms of the data maintained in the Interagency Research Information System. Staff reports on requests and responses are made to the Chairperson of the Panels.

APPENDIX D

UNIVERSITY REPRESENTATIVES ATTENDING THE
SECOND CONFERENCE ON COMPARABILITY IN RESEARCH
May 5 and 6, 1975

UNIVERSITY REPRESENTATIVES ATTENDING

THE SECOND CONFERENCE ON COMPARABILITY IN RESEARCH

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and Family Life
University of Kansas

Nina Beauchamp
School of Education
Tuskegee Institute

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APPENDIX E

SELECTED MEASURES IN FEDERAL RESEARCH ON CHILDREN AND YOUTH: FREQUENCY OF USE

	Number of Projects Intending to Use Measure (FY '75)*
AAMD Adaptive Behavior Scale	3
ABC Readiness Test	2
Academic Promise Test	1
Adjective Checklist	4
American College Testing Program Examination	1
Assessment of Children's Language Comprehension Test	1
Attitude Inventory	1
Barron's Ego Strength Scale	2
Bayley Scales of Infant Development	60
Bender-Gestalt Test	37
Bereiter-Englemann Preschool Evaluation Form	1
Bialer's Children's Locus of Control Scale	1
Boehm Test of Basic Concepts	35
Botel Reading Inventory	10
Brown IDS Self-Concept Reference Test	3
California Achievement Tests	79
California Basic Skills Test	39
California Personality Inventory	3
California Phonics Survey	1
California Preschool Social Competency Scale	2
California Psychological Inventory	7
California Short Form Test of Mental Maturity	2
California Test of Mental Maturity	11
California Test of Personality	9
Cattell Infant Intelligence Scale	17
Child Behavior Rating Scale	1
Children's Apperception Test	4
Children's Embedded Figures Test	6
Children's Personality Questionnaire	2
Classroom Behavior Inventory	1
Classroom Reading Inventory	1
Clymer-Barrett Prereading Battery	2
Cognitive Abilities Test	2
College and University Environment Scales	2
College Board Scholastic Aptitude Test	1
College English Placement Test	1
Comprehensive Tests of Basic Skills	54
Cooperative Preschool Inventory	1
Cooperative Primary Test	20
Cooperative Reading Comprehension and Math Tests	1
Cooperative School and College Ability Tests	1
Coopersmith Self-Esteem Inventory	17
Denver Developmental Screening Test	33
Detroit Tests of Learning Aptitude	4
Developmental Test of Visual-Motor Integration	4
Deveraux Adolescent Behavior Rating Scale	2
Deveraux Elementary School Behavior Rating Scale	4
Diagnostic Reading Scales	3
Draw-A-Person	20
Durrell Listening-Reading Series	11
Early Detection Inventory	1
Educational Development Series Test	1
French Pictorial Test of Intelligence	1
Gates-MacGinitie Reading Tests	49
Gates-MacGinitie Reading Tests: Readiness Skills	3
Gates-McKillop Reading Diagnostic Test	3
Gesell Developmental Tests	13
Gilmore Oral Reading Test	8
Goldman-Fristoe Test of Articulation	5
Goldman-Fristoe-Woodcock Test of Auditory Discrimination	3
Goodenough-Harris Drawing Test	5
Gough's Home Index Inventory	1
Graduate Record Examination	2
Gray Oral Reading Test	13
Halstead's Aphasia Screening Test	1

*Figures indicate the frequency with which these selected measures are named in the proposals of projects relating to children or adolescents.

	Number of Projects Intending to Use Measure (FY '75)
Harris Tests of Lateral Dominance	2
Hiskey-Nebraska Test of Learning Aptitude	3
Hooper Visual Organization Test	1
Hollingshead Scale	3
Houston Test for Language Development	2
How I See Myself	6
Illinois Test of Psycholinguistic Ability	45
Infant Behavior Record of the Bayley Scale	3
Intellectual Achievement Responsibility Questionnaire	12
Iowa Silent Reading Test	3
Iowa Tests of Educational Development	6
Iowa Tests of Basic Skills	59
Junior Eysenck Personality Inventory	1
Katz Adjustment Scales	1
Kent-Rosanoff Free Association Test	1
Kuhlman-Anderson Test	4
Language Facility Test	2
Language Modalities Test for Aphasia	1
Lee-Clark Reading Readiness Test	4
Leiter International Performance Scale	6
Lincoln-Osoretsky Test	2
Lorge-Thorndike Verbal Intelligence Test	10
Marianne Frostig Developmental Test of Visual Perception	12
Matching Familiar Figures Test	11
McGraw-Hill Basic Skills System	1
(MECHAM) Verbal Language Development Scales	2
Merrill-Palmer Scale of Mental Tests	3
Metropolitan Achievement Tests (MAT)	158
Metropolitan Readiness Tests	55
Minnesota Multiphasic Personality Inventory	20
Minnesota Preschool Scales	2
Minnesota Teacher Attitude Inventory	6
Minnesota Satisfaction Questionnaire	1
Missouri Children's Behavior Checklist	1
Mooney Problem Checklist	2
Multiple Affect Adjective Checklist	1
Murphy-Durrell Reading Readiness Analysis	4
Musical Aptitude Profile	1
Nelson Biology Test	1
Nelson Reading Test	4
Nowicki-Strickland Personal Reaction Survey	2
Nowicki-Strickland Version of Rotter's Scale	1
Ohio Vocational Interest Survey	3
Omnibus Personality Inventory	1
Opinion Attitude and Interest Inventory	1
Otis Lennon Mental Ability Test	14
Otis Quick-Scoring Mental Ability Test	3
Peabody Individual Achievement Test	11
Peabody Picture Vocabulary Test	112
Personal Orientation Inventory	3
Piers-Harris Children's Self-Concept Scale	14
Porch Index of Communicative Ability	1
Porteus Maze Test	10
Preschool Attainment Record	4
Preschool Language Scale	2
Primary Academic Sentiment Scale	1
Psychiatric Status Schedules	2
Purdue Pegboard	2
Purdue Perceptual Motor Scale	3
Purdue Teacher Evaluation Scale	1
Purdue Teacher Opinionnaire	2
Raven's Intelligence Tests	1
Raven's Progressive Matrices	21
Reading Readiness Test	2
Reynell Developmental Language Scales	1
Rorschach	15
Rosenberg's Self-Esteem Scale	1
Rosenzweig Picture-Frustration	1

	Number of Projects Intending to Use Measure (FY '75)
Rotter's Scale of Internality-Externality	4
Schaefer and Bell Parental Attitude Research Instrument	4
Scholastic Aptitude Test	5
School Motivation Analysis Test	2
School Readiness Survey	2
Screening Test of Academic Readiness	2
Self-Concept and Motivation Inventory (SCAMIN)	6
Sentence Completion Blank	6
Sequential Tests of Educational Progress	6
Short Form Test of Academic Aptitude	5
Sixteen Personality Factors Questionnaire	3
Slosson Drawing Coordination Test	1
Slosson Intelligence Test	26
Social Desirability Scale	1
Social Reaction Interview	2
Speilberger's STAI Scale	1
SRA Achievement Series	20
SRA Primary Mental Abilities	6
Stanford Achievement Test	96
Stanford-Binet Intelligence Scale	70
Stanford Diagnostic Arithmetic Test	6
Stanford Diagnostic Reading Test	18
Stanford Early School Achievement Test	14
Stanford Parent Questionnaire	2
Stern Activities Index	1
Student Attitude Inventory	1
Taylor's Manifest Anxiety Scale	3
Templin-Darley Tests of Articulation	4
Tennessee Self-Concept Scale	8
Tests of Adult Basic Education	1
Tests of Basic Experiences	50
Test on Understanding Science	1
Thematic Apperception Test	13
Thomas Self-Concept Values Test	6
Titmus Vision Tester	2
Torrance Tests of Creative Thinking	1
Utah Test of Language Development	2
Valett Developmental Survey of Basic Learning Abilities	2
Valett's Psychoeducational Inventory	1
Vane Kindergarten Test	2
Verbal Language Development Scale	1
Vineland Social Maturity Scale	31
Walker Problem Identification Checklist	2
Wechsler Adult Intelligence Scale	15
Wechsler-Belleview Intelligence Test	5
Wechsler Intelligence Scale for Children	81
Wechsler Preschool & Primary Scale for Children	22
Wide Range Achievement Test	77
Wisconsin Tests of Reading Skill Development	7
Work Values Inventory	3

APPENDIX F

DOCUMENTS PREPARED FOR THE INTERAGENCY PANELS ON EARLY CHILDHOOD AND ADOLESCENCE RESEARCH AND DEVELOPMENT*

DOCUMENTS PREPARED FOR THE INTERAGENCY PANELS ON EARLY CHILDHOOD AND ADOLESCENCE RESEARCH AND DEVELOPMENT*

Section 1: 1974-1975

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Heyneman, S.P. Discussion of marker variables and marker measures: A summary of the presentations at the APA meetings.

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Pearl, D. In furtherance of cumulative knowledge: Some NIMH initiatives.

Grotberg, E.H. (Chair.) Panel discussion: The Interagency Panels for Early Childhood Research and Development, and Research and Development on Adolescence. A series of papers presented at the annual meeting of the American Educational Research Association, Chicago, April 1974:

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Datta, L. Implications of Panel activities for the research community.

Heyneman, S.P. Presentations by the Interagency Panels on Research and Development in Early Childhood and Adolescence: A summary.

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Hurt, M., Jr., & Ouellet, R.H. Parenting skills: Comparability study, December 1974.

Lindsey, W.E. Instrumentation of OCD research projects on the family, June 1975.

Snapper, K.J., Barriga, H.H., Baumgarner, F.H., & Wagner, C.S. The status of children 1975, Spring 1975.

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Stern, C. Utility and feasibility of an instrument repository for researchers working with adolescent populations, May 1975.

Section 2: 1971-1973

Chapman, J. Early childhood research and development needs, gaps, and imbalances: Overview, February 1972.

Chapman, J., & Lazar, J. A review of the present status and future needs in day care research, November 1971.

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Lazar, J., & Chapman, J. A review of the present status and future research needs of programs to develop parenting skills, April 1972.

Searcy, E.O. Work experience as preparation for adulthood: A review of Federal job training, vocational, and career education programs, an analysis of current research, and recommendations for future research, May 1973.

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